

AREA	DESCRIPTION			95-090-03 95-091-04	COUNTY F.A.P. NO. SHT. NO. TOT. SHT NEW IM-NO56(5) 2 246 LEGEND
IORTHBOUND 2 3 4 5 6 7 SOUTHBOUND 2 3 4 5 6 7	EXPOSED CONCRETE NORTH OF TOLL PLAZA TO CHRISTINA CREEK BRIDGE CHRISTINA CREEK BRIDGE (STR# 705) TO SALEM CHURCH ROAD (STR# 711) SALEM CHURCH ROAD (STR# 711) TO CHAPMAN ROAD (STR# 714) CHAPMAN ROAD (STR# 714) TO A POINT 1000 FT. NORTH OF ROUTE 273 NORTH OF ROUTE 273 TO CHRISTINA RIVER BRIDGE (STR# 719) CHRISTINA RIVER BRIDGE (STR# 719) NORTH OF RTE 141 TO CHRISTINA RIVE (STR# 744) SOUTH OF PENN RR EXPOSED CONCRETE NORTH OF TOLL PLAZA TO CHRISTINA CREEK BRIDGE CHRISTINA CREEK BRIDGE (STR# 704) TO SALEM CHURCH ROAD (STR# 711) SALEM CHURCH ROAD (STR# 711) TO CHAPMAN ROAD (STR# 714) CHAPMAN ROAD (STR# 714) TO A POINT 1000 FT. NORTH OF ROUTE 273	R BRIDGE . (STR # 704)			REVISIONS SYMBOLS EXISTING GUARDRAIL PROPOSED GUARDRAIL EXISTING CURB SIX (6) TO SEVEN (7) INCHES IN HEIGHT EXISTING CURB SEVEN (7) INCHES OR GREATER IN HEIGH
6 7 8	NORTH OF ROUTE 273 TO CHRISTINA RIVER (STR# 720) CHRISTINA RIVER BRIDGE (STR# 720) NORTH OF RTE 141 TO CHRISTINA RIV STR# 744) SOUTH OF PENN RR CHRISTINA RIVER BRIDGE (STR# 744) TILITTLE MILL CREEK BRIDGE (STR#	746) 	AB BITUMINOUS	BREVIATIO NB	NS NORTHBOUND
	PAVING LEGEND STONE MATRIX ASPHALT WEARING SURFACE HOT MIX, HOT LAID BITUMINOUS CONCRETE PAVEMENT, TYPE 'B' BUTT JOINT (SEE DETAIL SHEETS 66,67,69)	BIT © CONN C.Y. DY EA. EXIST. FT. HR. IN L.F. L.S. MAX. MIN. MO.	CENTER LINE CONNECTION CUBIC YARD DAY EACH EXISTING FEET HOUR INCH LINEAR FOOT LUMP SUM MAXIMUM MINIMUM MONTH	NTS NO. P.C.C. RR SHT. SB S.F. SY STR S.E. TOT. TPK TYP.	NOT TO SCALE NUMBER PORTLAND CEMENT CONCRETE RAILROAD SHEET SOUTHBOUND SQUARE FEET SQUARE YARD STRUCTURE SUPERELEVATION TOTAL TURNPIKE TYPICAL

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- Twisted end anchorage to be removed and replaced with modified eccentric breakaway cable terminal (See detail No. B-4(94), pages 84-89)
- 2 Existing guardrail to barrier connection, approach type, to be removed and replaced (See detail No. B-6(94), pages 90-92)
- 3 Existing guardrail to barrier connection, exit type, to be removed and replaced (See detail No. B-8(94), pages 93-94)
- (4) Existing Guardrail to be adjusted (See detail page 81-83)
- (5) Existing Guardrail length to be lengthened (See detail page 81-83)
- (6) Existing guardrail to be removed
- (7) Portland cement concrete safety barrier to be removed and replaced (See details pages 70)
- 8 Approach slabs to be repaired
- (2) Existing curb six (6) to seven (7) inches in height (See detail 'k', page 63)
- (10) Existing curb seven (7) inches or greater in height (See detail 'K', page 63)
- (1) Proposed hot-mix, hot laid bituminous concrete curb type, 2
- (2) Existing catch basin to be adjusted (See detail, page 71,77-79)
- (See detail, page 71)
- (11) Crossover or access road to be overlaid to meet proposed conditions
- (15) Proposed contractor(s) equipment and storage area
- (6) RELOCATE EXISTING GAURDRAIL TO TANGENT
- (17) CURB REMOVAL

(16) CCAT guardrail system

NOTE: EVERY SITUATION OF THE ABOVE ITEMS ARE NOT CALLED OUT
ON THE PLAN SHEETS THAT FOLLOW. THE PLAN SHEETS ARE
TO BE USED AS REFERENCE GUIDES ONLY. EACH ITEM SHOULD
BE CHECKED IN THE FIELD AND ADDRESSED ACCORDING TO THE
ENCLOSED DETAILS AND SPECIFICATIONS.

GENERAL NOTES:

- 1. This contract is to be constructed in accordance with Delaware Department of Transportation Standard Specifications for Road and Bridge Construction, dated July 1985, as described in Section 105.04.
- 2. Maintenance of Traffic All work shall be performed in a manner that will ensure the least practicable obstruction to traffic consistent with safety, and shall comply with the Department manual entitled, "Traffic Controls for Streets and Highway Construction, Maintenance, Utility and Emergency Operations," dated March 1993. The most current version of this manual in effect at the time of advertisement for bids shall be used. Hereinafter, this manual shall be referred to as the "Traffic Control Manual." The Contractor shall submit a Traffic Control Plan for approval by the Engineer before the start of the project.
- best available information. The Contractor, prior to laying a run of drainage pipe or other involved construction, shall excavate within the alignment at points of possible conflict to determine if a conflict exists. Any conflicts shall be coordinated by the Contractor with the Engineer and the utility involved. The Engineer shall determine the solution. Excavating and backfilling of the test holes shall be measured and paid for in accordance with Item 208000, Excavation and Backfill for Pipe Trenches, but only to the actual depth excavated.
- The Contractor shall give two (2) weeks notice to the property owner when any fixture, shrub or other object must be removed from the right-of-way or easement area. If the owner has not attempted to salvage this property, the Contractor shall remove it without obligation. Compensation shall be incidental to the contract.
- 5. The ends of all curbs shall be depressed at a ratio of twelve to one (12:1), unless otherwise directed by the Engineer.
- 6. The Contractor shall provide and install PVC sleeves (4" inside diameter minimum, 6" inside diameter maximum) in proposed concrete sidewalks, islands, and medians for future traffic sign posts as directed by the Engineer. The lower end of the sleeve shall sit on the top of the subbase. The cost shall be incidental to the contract.

7. Catch basin and manhole steps may be of the type constructed of molded plastic with a reinforcing bar core, at no extra cost, in place of the type required and shown on the standard sheet D-1-11. The molded plastic type steps shall conform to the applicable sections of ASTM A-615, ASTM A-478 and ASTM D-4101.

PROJECT NOTES:

A. Project Objective

- The goal of this project is to resurface the contract area and construct safety upgrades within the parameters presented by the Special Provisions, Construction Plans, General and Project Notes of this contract.
- 2. To achieve the project objective, the Contractor and Department shall work closely together concerning scheduling, construction techniques and methods of operations. The Prime Contractor shall administer the contract with possible participation by two, or more Major Subcontractors and suppliers to work in and/or supply and deliver materials to the various project areas the contract has been divided into.
- 3. The Contractor is encouraged to present advantageous construction methods and innovative ideas that will expedite and improve construction work on this project. Submittals will be given consideration and reviewed by the Department for implementation into the project. All such submittals require Department and FHWA approval prior to implementation.
- 4. It is the responsibility of the bidder to make a thorough examination of the site and the work to be done before preparing their bid.
- 5. The Contractor's attention is directed to the fact that all applicable State Laws, municipal ordinances, and rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.
- 6. Due to the nature of this contract, the Department will modify subsection 108.01, Subletting of Contract, of the Standard Specifications to allow the Contractor to subcontract 70% instead of 50% of the total contract bid price, less specialty item exceptions.

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So That Work May Begin

7. It is the Department's intent to provide the Contractor with "Notice to Proceed"/on or about July 5, 1995, and 317 calendar days to complete the project.

B. <u>Contract Work Areas</u>

- The Contractor is advised that this contract has been divided into seven (7) work areas as shown on the plans. These areas have work in both the northbound and southbound directions.
- Field control within the work areas will be based on the use of existing Mile Post markers (generally spaced every two tenths of a mile), Contract plan sheets have a Mile Post scale to reflect this control as well as a referenced stationing for the Maintenance of Traffic plans.

. Coordination of Work Areas

- 1. The work must be coordinated by the prime Contractor such that no one work area will have an adverse effect on any other work area. Adverse effects would include, but may not necessarily be limited to, problems arising from conflicting maintenance of traffic setups, blocking of or delaying material delication, overlapping construction activities, disrupting the flow of traffic, etc.
- The Contractor will coordinate their work with the bridge painting contracts at I-295 and Del Rte 273 bridges.
- 3. Lane marking will be modified at the exit gore from southbound I-95 to northbound 273. In conjunction with the lane marking modification, overhead signing modifications will be required. Pavement markings will be placed by the Contractor, and Delaware Turnpike will perform the signing modifications. The Contractor shall notify the Engineer fourteen (14) calendar days in advance of placing the new pavement markings to coordinate concurrent signing work.
- 4. As noted in the suggested MOT plans, in Areas 6 and 7 where P.C.C. safety barrier is to be replaced, the Contractor shall schedule operations such that work adjacent to the median shall be performed concurrently northbound/southbound. During this phase only, the Contractor shall be allowed, based on approval from the engineer, to use existing median openings. He also shall be allowed, based upon approval from the Engineer, to construct temporary median crossings at their own expense.

Sequence of Construction

Given the heavy traffic volumes along the I-95 corridor, sequencing of construction activities to minimize disruptions to traffic are critical. The following general guidelines will apply.

- Lane and shoulder closings shall not be permitted during the following holiday periods:
 - June 30, 1995, 12:00 noon, through July 5, 1995, 9:00 p.m. (Independence Day weekend)
 - September 1, 1995, 12:00 noon, through September
 - 5, 1995, 9:00 p.m. (Labor Day) November 20, 1995, 5:00 a.m., through November 27,
 - 1995, 9:00 p.m. (Thanksgiving) December 12, 1995, 12:00 noon, through January 2, 1996, (Christmas)
 - April 4, 1996, 12:00 noon, through April 8, 9:00 p.m. (Easter week)
- No weekend work in August, and no weekday work in August between the hours of 5:00 a.m. to 9:00 p.m., unless advanced approval is received in writing from the Engineer.
- 3. It is anticipated, due to weather constraints, that all stone matrix asphalt will not be laid before the end of the 1995 construction season. Those areas not milled and paved with stone matrix asphalt by then shall be done in the spring of 1996. No milled or hot-mix, hot laid bituminous concrete, Type 'B', surface shall be left exposed over the winter. The Contractor will be responsible, at their own expense, to pave those areas with hot-mix, hot laid bituminous concrete, Type 'C', for the winter, and then remill, at their own expense, these areas in the spring of 1996, and resurface as shown on the plan sheets. However, subject to weather conditions, the Department reserves the right to modify this restriction.
- Ramp closures, excluding those serving as interstateto-interstate connections (I-295, I-95, and I-495) will be permitted, with seven (7) calendar days' advanced written approval of the Engineer, between the hours of 10:00 p.m. and 5:00 a.m. Service area ramps to remain open at all times. Only one ramp at a time may be closed on SB 1-95 at the Rte. 896 interchange.
- The Contractor shall prepare an operational plan to show how they propose to perform the various phases of construction, and submit it to the Engineer for review and approval a minimum of seven (7) calendar days prior

to its implementation. The plan shall show graphically and in writing the procedures and scheme the Contractor shall follow for the maintenance of traffic (MOT) setups, adjustments for MOT devices, rotomilling, paving, approach slab work, patching, and MOT take-down to get 2 lanes back in service.

- It is anticipated that the Contractor shall have two (2) milling/paving operations and one (1) operation for roadside safety improvements (e.g., guardrail, curb, etc.) at all times, unless the contractor can demonstrate that an alternate plan better meets the objective of this project.
- Areas 2 through 🔭
 - For milling, Type 'B' hot-mix, hot laid bituminous overlay, shoulder safety improvements and approach slab repairs, two (2) adjacent lanes in each direction will be closed from Area 2 through Area 4 from Sunday 9:00 p.m. to Friday 5:00 a.m. The work cannot be done in the months of August or September.
- 8. Areas & through 8:
 - Unless advanced approval is received in writing from the Engineer, no lane closures will be permitted north of Area 4 for milling and paving operations from 5:00 a.m. Friday to 9:00 p.m. Sunday in the month of August.
 - All work on the contract north of Area 4, other than bridge approach slab replacement, shall be between the hours of 9:00 p.m. and 5:00 a.m. However, the work area must be opened to traffic by 5:00 a.m.
 - Approach slab work in Areas & through 8 shall be done between the hours of 9:00 p.m. Friday to 5:00 a.m. Sunday. Approach slab work shall not be done in the month of August.

Rotomilling

It is the intent of this contract to rotomill off the existing surface mat of open graded hot-mix, which is approximately 1* thick. The close proximity of structures in certain areas of the contract will require the milling of the existing hot-mix overlay to the surface of the existing underlying concrete pavement. Additionally, the existing hot-mix overlay may have to be milled beyond the 1" depth of open graded material for bridge clearance requirements. At

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these locations, any drop-off 2 inches or greater shall be beyeled. Other rotomilling work will be required for tie-ins of resurfacing material as noted on the plans. Such work would include, but not necessarily be limited to, taper milling to structures (bridges, safety barriers, catch basins, etc.) and other areas required by project circumstances. Payment to be under 760000, Pavement Milling, Hot-Mix.

- Existing asphalt-rich patches to be milled out (payment under 760000, Pavement Milling, Hot-Mix) and then patched with Type B hot-mix (item 401007, Hot-Mix, Hot Laid Bituminous Concrete Pavement, Type B, Patching).
- 3. Before rotomilling operations are started under bridge structures, the existing clearance shall be checked by the Contractor. Clearances shall be checked completely across the roadway at the bridge beams such that the lowest existing clearance point can be determined for each structure. It is the intent of this contract to achieve a minimum 16'-0" clearance if possible. If not, the existing condition shall be made no worse.
- In no case shall milling be permitted below the top surface of the existing underlying concrete pavement.
- Milled material from Item 760000, Pavement Milling, Hot-Mix, shall become the property of the Contractor and removed from the site.
- Unless closed to traffic, all existing underlying concrete pavement exposed during construction shall be immediately overlaid with the appropriate hot-mix.
- 7. The Contractor shall be responsible for proper cleaning of all milled areas prior to opening them to traffic. Should separate sweeping and/or vacuuming be required due to excess dirt or stone accumulation, such additional cleaning shall be performed by Contractor incidental to Item 760000, Pavement Milling, Hot-Mix.

F. Catch Basin and Manhole Adjustment

- Basins and manholes requiring adjustment shall be adjusted by a method at Contractor's option as long as it produces the required results and the method or methods are approved by the Department.
- A suggested adjustment method for catch basins using a steel frame is shown in the contract drawings.
- Any basin and manhole repairs and/or adjustments shall be performed and paid for under Item 710001 and Item 710002 in the Proposal.

4. Basins shall be adjusted to conform to the required shoulder slopes and curb reveal heights throughout the project area. However, in no case shall resurfacing material come in contact with the perimeter of the basin grate.

G. Curb Height Adjustment

- Due to safety requirements, curb height is not to exceed 4" in height at the completion of the contract.
- 2. Existing curb greater than 4" in height will be modified or removed as necessary to achieve a safe condition. Ultimately curb heights shall not exceed 4" in height throughout the project area.
- 3. Replacement of the 2' wide Type C Hot-Mix maintenance apron as required shall be paid for under item 401003,999998-0/ Hot-Mix Hot Laid Bituminous Concrete Pavement, Type C, Municipal C, Mun
- 4. Adjustments to curb height shall be accomplished during the resurfacing operations. However, when curbing must be removed, it shall first be removed prior to the resurfacing operation.
- 5. The horizontal sawing of hot-mix curb to provide the 4" maximum height shall be paid for under Item 762001, 762500 "Saw Cutting, Hot-Mix."

H. Resurfacing

- 1. The Contractor shall be permitted by the Department to use hot-mix bituminous concrete and stone matrix asphalt wearing surface mixes from different batch plants as long as each paver is supplied by the same plant.
- Prior to the commencement of any resurfacing work, the Contractor shall have their sequence of operations plan approved by the Engineer.
- 3. All necessary adjustments to catch basins, manholes, rotomilling for bridge clearances and tapers, rotomilling or cutting of butt joints and existing hot-mix patches, cleaning of millings from roadway surface and any other preparatory work shall be completed prior to the commencement of resurfacing operations.
- 4. In all cases, the Contractor shall have a drop-off at pavement edge that is less than two (2) inches.
- 5. The Contractor shall consult the typical resurfacing section(s) in the Contract Plans that apply to the

specific areas he/she is working in. Particular attention shall be made to shoulder resurfacing treatments and how they are proposed to be accomplished.

- 6. P.C.C. Safety Barriers shall be replaced prior to resurfacing work since some sections will have the hot-mix-overlay-placed up against a portion of the 3" reveal at the base of the barriers.
- . Overlay shall be accomplished by mat thickness not cross slope.

. Guardrail

- Due to safety requirements, guardrail height in the contract area shall be within two (2) inches, up or down, from the standard design height of 2'-3".
- Where guardrail is deficient in height as described above, it shall be adjusted by the Contractor to be the standard design height of 2'-3" (payment under Item 720573, Adjust Guardrail Height).
- 3. Adjustments to guardrail and upgrade replacements shall be accomplished after the resurfacing operations have left the area. This work shall be performed within a reasonable time frame following the resurfacing operations.
- 4. Guardrail shall be adjusted in height by first removing the existing rail element and either replacing the existing offset brackets with an adjustable bracket or raising or lowering the steel posts to proper grade with a pounder. Once the adjustments have been made, the steel rail element shall be reattached.
- 5. Any damage to the surrounding hot-mix paving or curbing at the base of the steel posts that is caused by adjusting the post height shall be repaired by the Contractor with hot-mix paving, Type C. Such repair costs shall be incidental to Item 720573 in this contract's Special Provisions.
- Guardrail removed shall be replaced prior to opening the area up to traffic.
- No more guardrail shall be removed in a day than can be replaced by the end of the working day it was removed in.
- Various existing guardrail connections to bridges and barriers and end treatments shall be upgraded as noted in the Contract Plans.

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- . Existing P.C.C. Type A anchor block removal shall be incidental to Item 211002 in this contract's Proposal.
- 10. Existing guardrail removals that are required for placement of Item 720570 shall be paid for under Item 211002 in this contract's Proposal. Removed guardrail that is not to be re-used shall become the property of the Contractor and removed from the site the day it is taken out.
- 11. Detail No. B-6 (94), Guardrail to Barrier Connection Approach Type I and Detail No. B-8 (94), Guardrail to Barrier, Exit Type I and II details shall be used for Item 725000 and Item 725001, respectively. The removal of the existing guardrail to barrier connections shall be incidental to Items 725000 and 725001 and shall become the property of the Contractor and removed from the site the day it is taken out.

J. P.C.C. Safety Barrier

- Construction Plan Areas 6 and 7 have P.C.C. Safety Barrier in the median. Safety Barrier in Areas 6 and 7, from north of Route 273 to south of Route 141 shall have selected replacement of damaged sections.
- P.C.C. Safety Barrier in Areas 6 and 7:
 - a. The Contractor shall remove damaged sections as indicated in the Construction Plans and as directed by the Engineer.
 - b. Since the barrier was originally constructed using slipform methods, the replacement sections shall be oast-in-place process. (See Glas for This change
 - c. Where joints occur, there shall be placed a 1* thick approved expansion material as per details in the Construction Plans.
 - d. If the existing barrier anchor bars are damaged during removal of the sections, they shall be replaced by the Contractor. If the anchor bars are rusted, they shall be cleaned and coated with an approved protective coating or removed and replaced as directed by the Engineer. Such work shall be incidental to Item 720512 of this Contract's Special Provisions.
- 3. When P.C.C. Safety Barrier is removed, it shall be replaced before that area is opened to traffic.
- No more safety barrier shall be removed than can be replaced by the end of the working day it was removed in.

- JD-1 Type reflectors or approved equal of the correct color shall be placed as required on all existing and replaced safety barrier installations in Areas 6 and 7 as detailed and shown in this contract's Special Provisions. Reflectors shall be paid for under Item
 720545, Reflector Yellow, Concrete. Reuse of existing
 reflectors in salishaday condition is permitted,
 The removal of P.C.C. Safety Barrier shall be
 incidental to Item 720512 of this contract's Special
- provisions.

Reflectors

- Reflectors shall be required on newly installed and existing P.C.C. Safety Barriers as per Section "K" paragraph 5 of these Project Notes. (See Alle added to J. 5)
- When required, individual replacement JD-1 Type reflectors or approved equal shall be furnished and installed by the Contractor under Item 720545 of this contract's Special Provisions.
- When required, individual replacement reflectorized washers shall be furnished and installed by the Contractor under Item 720542 and Item 720543 of this contract's Special Provisions.

Bridge Deck Patching

Patching locations will be as directed by the Engineer, and will be paid for under Item 602575, Deck Repair, 1" to 3" Depth.

Topsoil Wedge

- The Contractor shall place a topsoil, wedge shoulder backing for shoulders that are adjacent to grassed areas. The backing shall be placed as directed by the Engineer in a wedge such that it feathers out to the existing ground beyond the shoulder.
- If the drop-off exceeds 2", the topsoil wedge backing shall be placed as soon as is practical.
- Once the topsoil backing has been placed, it shall be immediately seeded and mulched to stabilize it.

Utilities

The Turnpike shall be responsible for identifying any direct burial utility line and relocating those that . conflict with any shoulder safety improvement activities.

- Even though this project is basically a resurfacing contract, the Contractor is advised that there are various utilities located within the contract areas and he/she should exercise caution when performing upgrade work in those areas. The Contract Plans show the general areas of utility locations. However, "Miss Utility" shall be contacted by the Contractor as per the Standard Specifications to verify locations. Additionally, the Delaware Turnpike shall also be contacted for the location of lighting cables which generally run behind and near existing guardrail posts and bridge parapets and are direct burial.
- The Contractor is advised to contact Mr. William Thatcher, Expressways Operations Superintendent (Phone 302-368-6866) for the location of Delaware Turnpike underground utility prior to any excavation, removal and guardrail work, etc.
- The Contractor is advised that there are traffic counter loops that will be involved in the rotomilling work. These facilities shall be handled as per Section "P" of these Project Notes.
- The work involved in relocating or otherwise altering utilities which interfere with the construction work, and are not solely made for the convenience of the Contractor, will be performed by others without cost to the Contractor.
- Any damage caused to existing underground or above ground utilities shall be repaired immediately at the Contractor's expense to the satisfaction of the Engineer.

Traffic Loop Detectors

- The Contractor is advised that there are five (5) traffic count detection stations with a total of 49 counter loops within the contract limits. It is anticipated that these loops will be destroyed by the milling of the existing open-graded surface course.
- Destroyed loop detectors shall be replaced by the Department at no cost to the Contractor. See Below

Striping

- Prior to resurfacing work, the Contractor shall take an inventory of the existing pavement striping with the Engineer or their representative and record it in a mutually agreed format. Such inventory shall be used by the Contractor to replace striping during the resurfacing operations.
- 0. 2. A new system of trubbic court detection loops was added to the entract and istall jointly by the contractor and lol Dot Troppin. See plan sheets for locations.

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2. Temporary striping shall be placed as required using paint or tape, except on the final surface course. It is anticipated that final pavement markings will be placed directly on the final surface course prior to opening the road to traffic; thus, temporary markings will not be required.

// 3. Permanent striping shall be placed as required using permanent tape on the lane lines (Item No. 748515) and the gore areas (Item No. 748516) as specified in this contract's Special Provisions. Paint shall be used on the edge lines (Item No. 758002). 748507

Edgeline paint shall be applied such that the far edge of the paint (in direction of traffic flow) shall be set at the edge of the existing underlying concrete pavement. This edge can be generally identified by the existing lane/shoulder joint crack or as directed by the Engineer. As with paragraph 1 above, an inventory shall be taken by the Contractor of the physical evidence and he/she shall witness and record the existing identifying longitudinal crack.

- Permanent pavement striping tape shall be transversely cut at bridge joints such that movement will not tear or dislodge the tape.
- The Contractor shall take care as provided for in Section 748, Pavement Markings, of the Standard Specifications, such that tape is not damaged during paving and rolling operations.
- Consultant
 The Contractor is advised that he/she shall also witness and record in their striping inventory the existing 12" wide transverse speed lines that extend completely across all lanes. The speed lines are in an area south of the Service Area and in Churchmans Marsh Area in both the northbound and southbound lanes. Lives were restablished using Thermoplatic.

 Typical striping layouts are shown in the Construction
- Upon request, the Department has available a video of the Interstate roadway that can be of use, for striping. work
- 10. Traffic shall not be permitted onto resurfaced areas until the striping has been placed.
- 11. See Sheet 237 and 238 for typical pavement markings. Sheet 238 also shows the proposed striping conditions for southbound I-95 to Route 273.

O. Approach Slabs

This item of work has been established to provide for the improvement of the concrete approach slabs at the following bridges:

Bridge No.	Location
704	I-95 SB over Christina River @ Route 896
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716	I-95 NB over Christina River & Route 839 I-95 NB over Route 7 deleted from contract I-95 NB over Route 7
717	I 95 NB over Route 75 Charge of Co.
719	I-95 SB over Christina River
720	I-95 NB over Christina River
744	I-95 SB over Christina River

- 2. Alternative No. 1 involves the total removal of the existing approach slabs and replacement with new reinforced concrete slabs, all as shown in the contract documents.
- Alternative No. 2 requires the removal of the top ten (10) inches of the existing approach slab and the furnishing, placing, and finishing of a concrete overlay as shown in the contract documents.
- 4. Prior to the commencement of any repair work, the Contractor shall have their Sequence of Operations Plan approved by the Engineer.
- 5. Work areas associated with the replacement/overlaying of approach slabs shall be protected from vehicular traffic by portable P.C.C. safety barriers.

R. Maintenance of Traffic (MOT)

- 1. Traffic control design and signs to conform to the "Traffic Control Manual," or as directed by the Engineer and/or Chief Safety Officer.
- Traffic Control Plans are provided to serve as a guide for the Contractor. The Contractor may submit alternative traffic control plans (T.C.P.) of their own for approval by the Engineer prior to their starting construction.
- 3. Cases 25 and 26 of the "Traffic Control Manual" may be used for typical lane closings with the approval of the Engineer.
- 4. Case 27 of the "Traffic Control Manual" may be used for certain shoulder work with the approval of the Engineer.

- 5. Approved Traffic Control Plans may be modified as needed by the Engineer and/or Chief Safety Officer to ensure the safety of the traveling public, the working personnel and the work.
- The Contractor shall be required to have an American Traffic Safety Services Association (ATSSA) certified supervisor on this project at all times. The certified ATSSA supervisor's sole job will be to supervise the installation, operation, maintenance and servicing of traffic control devices. He/she shall also serve as the liaison with the Department concerning the Contractor's maintenance of traffic. The payment for the certified ATSSA supervisor shall be incidental to Item No. 763500, "Maintenance of Traffic," of this contract's Special Provisions.
- 7. The Contractor shall give the Engineer seven (7) calendar days advanced notice prior to closing any lanes.
- 8. The Department reserves the right to inspect the maintenance of traffic equipment for workability at anytime during the life of the contract.
- 9. The Contractor and all others shall perform all work in a manner that will insure the least practicable obstruction to traffic consistent with safety and compliance with the "Traffic Control Manual."
- 10. Maintenance of traffic shall be maintained through the project sites at all times in accordance with Subsections 104.07, 107.09, and 107.10 of the Standard Specifications.
- 11. A maximum of two (2) through-lanes can be closed at any one time in each direction, except where only two (2) lanes are existing. At these areas, the Contractor may only close one (1) lane at a time.
- 12. The use of shoulder for the maintenance of traffic in areas of milling/overlay is prohibited unless so directed by the Engineer.
- 13. All signs, lights, barricades and other devices shall conform to the Standards cited under Section "S", Maintenance of Traffic, paragraph 1 of these Project Notes. All devices shall be furnished by the Contractor and shall be new or refurbished. All refurbished traffic protection devices must be approved by the Engineer before being used.
- 14. The Contractor is cautioned that "Special Events" might take place during construction which might increase

CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHTS.				
95-090-03 95-091-04	NEW CASTLE	IM-N056(5) IM-N059(3)	8	246				
GENERAL AND PROJECT								
	. 1	NOTES		,				
REVISIONS								

traffic and effect resurfacing operations. Such events as University of Delaware football games should be considered.

- 15. The expense of any necessary traffic controls during liquidated damages will be borne by the contractor.
- 16. All vehicles in a work area shall display working rotating or strobe lights for the purpose of warning approaching drivers of a vehicular traffic hazard requiring unusual care in approaching, overtaking or passing.
- 17. One worker shall be used at all times to maintain traffic control devices and shall have a vehicle equipped with a working rotating or strobe light. This work and furnishing of vehicle shall be incidental to Item 763500 of this contract's Special Provisions.
- 18. All lights on plastic drums to have plastic battery boxes.
- 19. All "B" lights on plastic drums to have plastic battery box inside the drum.
- 20. Shoulder storing of signs will not be permitted.
- 21. All workers shall wear reflectorized safety vests.
- 22. A 48" x 24" Arrow Sign (W1-6) shall be placed in the bottom of the arrow panel as a backup in case the arrow panel goes out.
- 23. The Contractor shall place a 48" x 48" "EXIT" sign with an arrow at exit point of off-ramps to alert and direct drivers exiting. The sign shall be as detailed and specified in this contract's Special Provisions. The Contractor shall furnish a minimum of four (4) "EXIT" signs.
- 24. The Contractor shall be required to furnished Message Boards with quantity as noted in the plans and location and message to be as directed by the Engineer. Message boards shall only be paid for when being used in an actual MOT set-up.
- 25. The Contractor shall supply six (6) plastic drums with Type "B" lights on the first two (2) drums for protection of advanced Message Boards when the location of device requires it.
- 26. The Contractor will not be allowed to use the general superintendent as the ATSSA person on the project.

- 27. The traffic officers must be uniformed and equipped with marked Delaware State police vehicles with full light bar.
 - 28. Contractor shall post "ROAD WORK NEXT 15 MILES" signs at the start of the project northbound and southbound. Contractor shall place a "RAMP OPEN" sign 1500 feet in advance of all exit ramps open to traffic.
 - 29. Work shall not commence until the truck-mounted attenuators are in place as directed by the Engineer.
- 30. All stationary work zone construction signs shall be fabricated with durable fluorescent sheeting, and will not require a Type 'B' light.
 - 31. If the Contractor has not removed the maintenance of traffic set-ups for an evening lane closure by 5:00 a.m., the Department shall remove the devices and bill the Contractor for all costs incurred.
 - 32. When construction phasing calls for closing down to two lanes in one direction, the Contractor shall place black and white 45 MPH regulatory signs. These signs shall be removed prior to opening traffic to normal operation. The cost shall be under Item 743525, Temporary Warning Signs.

Lighting

- The Contractor shall provide and maintain adequate lighting to meet safety and working requirements in the working area(s) for nighttime operations.
- 2. Lighting provided by the Contractor and approved by the Engineer shall be paid for under Item 746591, "Furnish and Maintain Portable Light Assembly."

parking and Storage Areas

If the Contractor elects to use Turnpike facilities that are available and approved for use by the Engineer for parking and storage of materials for their convenience, they must restore the area(s) to their original condition and to the satisfaction of the Engineer, including routes of ingress and egress. This restoration will include, but not be limited to, paving, sodding, plantings, curbing, structures, utilities, etc.

The Department will not be liable for any loss or damage to the Contractor's material and equipment in these areas.

Any and all cost required for restoration will be borne by the Contractor.

- The Construction Plans show five (5) separate parking and storage areas which may be used by the Contractor as stated above.
- The Contractor shall adhere to the proper setbacks from any traveled lane for the parking of their equipment and storage of materials.

U. Field Office

- 1. A building for the field office shall be provided by the Department at the Delaware Turnpike Engineering and Maintenance Facility, I-95 and Chapman Road for use of Delaware Turnpike Engineers.
- The Contractor may elect to furnish and maintain a trailer for their own use. Such trailer to be located at a site approved by the Engineer at the Delaware Turnpike Engineering and Maintenance Facility at I-95 and Chapman Road.

CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHTS.			
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GENERAL AND PROJECT							
	`	NOTES					
REVISIONS							
ADDENDUM	I, REVISE						

NOTES 5/31/95 S.K.

DELAWARE TURNPIKE AND I-95 PAVEMENT RESURFACING AND SAFETY IMPROVEMENTS

SHT. NO. TOT. SHTS. 95-090-03 NEW IM-N056(5) 95-091-04 CASTLE IM-N059(3)

QUANTITY SHEET

REVISIONS

SECTION: 200 - EARTHWORK

ITEM #	DESCRIPTION	UNIT	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 7 (1-95)	TOTAL
	EXCAVATION AND EMBANKMENT	C.Y.	4	15	18			208	342	587
				1350	1625	525	600	600	150	5150
	UNDERCUT EXCAVATION, PATCHING	C.Y.		<u></u>			<u></u>	40	7	47

SECTION: 300 - BASES

ITEM #	DESCRIPTION	TINU	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7 (TPK)	AREA 7 (I-95)	TOTAL
302003	GRADED AGGREGATE BASE COURSE.	SY- IN	727	1436	605	446	1839	1290	857	7200
307000	TYPE B, PATCHING CRUSHER RUN (TEMPORARY ROADWAY MATERIAL)	TON	20	·		20		20	35	95

SECTION: 400 - BITUMINOUS PAVEMENTS

ITEM #	DESCRIPTION	UNIT	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7 (TPK)	AREA 7 (1-95)	TOTAL
401002	HOT-MIX, HOT LAID BITUMINOUS CONCRETE PAVEMENT, TYPE B	TON	8124	19963	8410	6503	25944	17889	12082	98915
401003	HOT-MIX, HOT LAID BITUMINOUS CONCRETE PAVEMENT, TYPE C	TON	381	1034	368	332	1356	923	606	5000
401007	HOT-MIX, HOT-LAID BITUMINOUS CONCRETE PAVEMENT, TYPE B PATCHING	TON	10	20	8	6	25	19	11	99
401517	STONE MATRIX ASPHALT WEARING SURFACE	TON	6555	17792	6328	5710	23342	15888	10434	86049
402000	HOT-MIX, BITUMINOUS CONCRETE AND/OR COLD-LAID BITUMINOUS CONCRETE (TRM)	TON	20			20		20	35	95

DELAWARE TURNPIKE AND I-95 PAVEMENT RESURFACING AND SAFETY IMPROVEMENTS

CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHTS.						
95-090-03 95-091-04	NEW CASTLE	IM-N056(5) IM-N059(3)	11	246						
30-031-04	VASIGE	1111 11000101	L	,1						
	QUANTITY SHEET									
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REVISIONS										

SECTION: 500 - RIGID PAVEMENT

SECTION: ITEM #	DESCRIPTION	UNIT	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7 (TPK)	AREA 7 (I-95)	TOTAL
503003	PATCHING P.C.C. PAVEMENT,	s.y.						160	27	187
503004	LESS THAN 16', TYPE I PATCHING P.C.C. PAVEMENT,	s.y.						320	54	374
	16' AND OVER, TYPE II	EA.						468	78	546
503005	DEFORMED BARS	EA.						468	78	546
503006 * 503503	DOWEL BARS PATCHING CONCRETE	SY-						2880	486	3366
503516	SAWCUTTING AND SEALING	LF.						1860		1860

* DENOTES FIXED PRICE ITEM

SECTION: 600 - STRUCTURES

SECTION:	800 - 31NOCTORES			4DE 4 7	AREA 4	AREA 5	AREA 6	AREA 7	AREA 7	TOTAL
ITEM #	DESCRIPTION	UNIT	AREA 2	AREA 3	AREA 4	ANEA 3		(TPK)	(I-95)	4440
	- C ALLCONDY	SF.					1440			1440
602546	WATERPROOFING P.C.C. MASONRY			50			50	50	25	175
602575	DECK REPAIR.1"TO 3" DEPTH	SF.		30						
					1	<u> </u>		!	<u> </u>	

SECTION: 700 - 707 - PORTLAND CEMENT CONCRETE

SECTION:	DESCRIPTION	UNIT	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7 (TPK)	AREA 7 (I-95)	TOTAL	
701001	PORTLAND CEMENT CONCRETE GUTTER, 4"	SY.			1556					1556	

SECTION: 707 - 718 - DRAINAGE

SECTION:	DESCRIPTION	UNIT	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7 (TPK)	AREA 7 (I-95)	TOTAL
710001	ADJUSTING AND REPAIRING EXISTING	EA.	5	22		2	51	28	26	134
710002	CATCH BASIN AND MANHOLE (CATCH BASIN) ADJUSTING AND REPAIRING EXISTING	EA.					4	2		6
715006	CATCH BASIN AND MANHOLE (MANHOLE) PERFORATED PIPE UNDERDRAINS, 4"	LF.						50	50	100

DELAWARE TURNPIKE AND I-95 PAVEMENT RESURFACING AND SAFETY IMPROVEMENTS

SECTION: 719 - 731 - GUARDRAIL AND FENCING

SECTION.							4054 C	AREA 7	AREA 7	TOTAL
ITEM #	DESCRIPTION	TINU	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	(TPK)	(I-95)	
720001	GALVANIZED STEEL BEAM GUARDRAIL (STEEL POST)	L.F.	200	562.5	5537.5	562.5	475	362.5		7700
720005	STEEL RAIL ELEMENT, STRAIGHT	L.F.	25	62.5	12.5	37.5	50	37.5	112.5	337.5
720007	GALVANIZED STEEL POSTS	EA.		17	· 5	24	60	35	34	175
720008	GALVANIZED STEEL BRACKETS	EA.	3	6	2	4	5	4	10	34
720010	TREATED WOOD OFFSET BLOCKS	EA.	3	6	2	4	5	4	10	34
720501	CRASH CUSHION (SAND BARRELS)	EA.		28						28
	RELOCATING PORTABLE P.C.C. SAFETY BARRIER	L.F.					850	900	1000	2750
720506		1					240			240
720512		EA.					28	28	28	84
720518	RELOCATING CRASH CUSHION (SAND BARRELS)	 	C207	11208	3297	2425	15286	5168	9557	53148
720527	PLASTIC DRUMS	EA-DY	6207 14	11206	8	14	28	22	10	108
720542	REFLECTORS WHITE, GUARDRAIL	EA.		16	28	16	2	14	2	78
720543	REFLECTORS YELLOW, GUARDRAIL	EA.		10			591	63		654
720545	REFLECTORS YELLOW, CONCRETE	EA.						22	10	108
720552	REFLECTOR PANELS	EA.	14	12	8	14	28		10	100
720567	FURNISH & MAINTAIN PORTABLE P.C.C. SAFETY	EA.		850		·	50	100	150	1150
	BARRIER									<u> </u>
720570	MODIFIED ECCENTRIC LOAD	EA	8	12	8	15	16	16	5	80
	BREAKAWAY CABLE TERMINAL	EA.	0	12						0077 5
720573	ADJUST GUARDRAIL HEIGHT	L.F.	475			237.5		550	1450	2837.5
725000	GUARDRAIL TO BARRIER CONNECTION APPROACH TYPE	EA.	6	10	4	14	4	10	44	52
725001	GUARDRAIL TO BARRIER CONNECTION EXIT TYPE	EA.	1				1			2

DELAWARE TURNPIKE AND I-95 PAVEMENT RESURFACING AND SAFETY IMPROVEMENTS

CONTRACT COUNTY F.A.P. NO. SHT. NO. TOT. SHTS. 95-090-03 NEW IM-N056(5) 13 246

QUANTITY SHEET

REVISIONS

ADDENDUM #1 - REVISE QUANTITIES 5/31/95 SK

SECTION: 732 - 741 - LANDSCAPING AND EROSION CONTROL

ITEM #	DESCRIPTION	UNIT	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7 (TPK)	AREA 7 (I-95)	TOTAL
732500	TOPSOIL	TON	42	150	102	61		32	3	390
734002	PERMANENT SEEDING ROADSIDE	S.Y.	1667	5977	2089	1811		536	89	12169
735006	STRAW MULCHING	S.Y.	1667	5977	2089	1811		536	89	12169

SECTION: 742 - 754 - TRAFFIC

•	ITEM #	DESCRIPTION	UNIT	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7 (TPK)	AREA 7 (I-95)	TOTAL	
	743003	ARROWPANELS, TYPE 'C'	EA-DY	16	40	16	-24	120	60	156	432	
	743500	WARNING LIGHTS, TYPE 'A'	EA-DY	16	40	16	24	120	60	156	432	
	743501	WARNING LIGHTS, TYPE 'B'	EA-DY	245 2	-40 -	466	312	5 52	294	2124	6 240	
	743504	WARNING SIGNS	EA.	90	16	15	51			24	196	
Λ	743514	FURNISH AND MAINTAIN MESSAGE BOARD	EA-DY	-379 -421		-66- 74	-36- 40	-48 -53	-39 -43	-328 365	-896 996	
	743525	TEMPORARY WARNING SIGNS	EA-DY	90	16	15	56		5	6	188	
	743537	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	EA-DY	16	40	16	24	120	60	156	432	
	746591	FURNISH AND MAINTAIN PORTABLE LIGHT ASSEMBLY	EA-DY	8	23	9	39	169	114	70	432	ı
	748020	TEMPORARY MARKINGS, PAINT 6"	L.F.	31278	79763	31450	40300	126680	101070	57750	468291	į
	748022	TEMPORARY MARKINGS, TAPE 6"	L.F.		8480			8740	9450	10260	36930	į
	748501	REMOVAL OF PAVEMENT STRIPING	L.F.	381	1034	368	332	1356	923	606	5000	l
	748507	PERMANENT PAVEMENT STRIPING, EPOXY RESIN PAINT, 6"	Ĺ.F.	20330	54740	19400	16300	64160	54360	32450	261740	
	748515	INSTALLING RETROREFLECTIVE PREFORMED PATTERNED MARKINGS, 6"	L.F.	8098	23773	7550	8150	37810	10535	8800	104716	ĺ
	748516	INSTALLINGRETROREFLECTIVE PREFORMED PATTERNED MARKING, 12"	L.F.	2850	1250	4500	3850	7200	7150	3850	30650	
L 2	★ 742500	FLAGGER, NEW CASTLE COUNTY	HR. ⚠	19 4324	45 2074	19 1573	28 738	139 1959	69 1218	181 3030	500 14916 -	

DELAWARE TURNPIKE AND I-95 PAVEMENT RESURFACING AND SAFETY IMPROVEMENTS

CONTRACT COUNTY F.A.P. NO. 95-090-03 NEW IM-N056(5) 95-091-04 CASTLE IM-N059(3) TOT. SHTS. SHT. NO. 14

QUANTITY SHEET

802513 -

REVISIONS

ADDENDUM #1 - REVISE QUANTITIES 5/31/95 SK

224529

156

52698

133

61608

506

160923

141449

96390

SECTION: 755 - 763 - MISCELLANEOUS

ITEM #	DESCRIPTION	UNIT	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7 (TPK)	AREA 7 (I-95)	TOTAL
755002	HOT-MIX, HOT LAID BITUMINOS CONCRETE CURB, TYPE 2	LF.	3600			P				3600
758000	REMOVAL OF EXISTING P.C.C. PAVEMENT. CURB, SIDEWALK, ETC.	S.Y.		***************************************	1556			480	81	2117
759502	FIELD OFFICE, SPECIAL I	EA-MO	•5	2	1.5	2	2	2	1	11
760000	PAVEMENT MILLING, HOT-MIX	SY-IN	61168	157637	-60741	-51687	218903	137643	-92490 -	-780269
760501	PAVEMENT MILLING. PATCHING	SY-IN	184	348	144	103	446	332	193	1750
761001	BUTT JOINTS, HOT-MIX	S.Y.	-4325	-3792	-1000-	-1167	-6491-	-4392-	-4500 -	-25667
761002	BUTT JOINTS, CONCRETE	S.Y.						1004		1004
-762001	SAW CUTTING, HOT-MIX HORIZONTAL	L.F.	145	380	642		<u> </u>	5629	10140	16936
762002	SAW CUTTING, CONCRETE (FULL DEPTH)	L.F.						936	156	1092
763000	INITIAL EXPENSE	L.S.	LS	LS	LS	LS	LS	LS	LS	LS
763500	MAINTENANCE OF TRAFFIC	L.S.	LS	LS	LS	LS	LS	LS	LS	LS
763505	TRAFFIC OFFICERS	HR.	160	480	160	96	544	304	688	2432
763508	PROJECT CONRTOL SYSTEM DEVELOPMENT PLAN	L.S.	LS	LS	LS	LS	LS	LS	LS	LS
763509	CPM SCHEDULE UPDATES AND/OR REVISIONS	EA-MO	•5	2	1.5	2	2	2	1	11
762500			577	506	133	156	865	586	600	3423-

577

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DELAWARE TURNPIKE AND I-95 PAVEMENT RESURFACING AND SAFETY IMPROVEMENTS MAJOR QUANTITIES

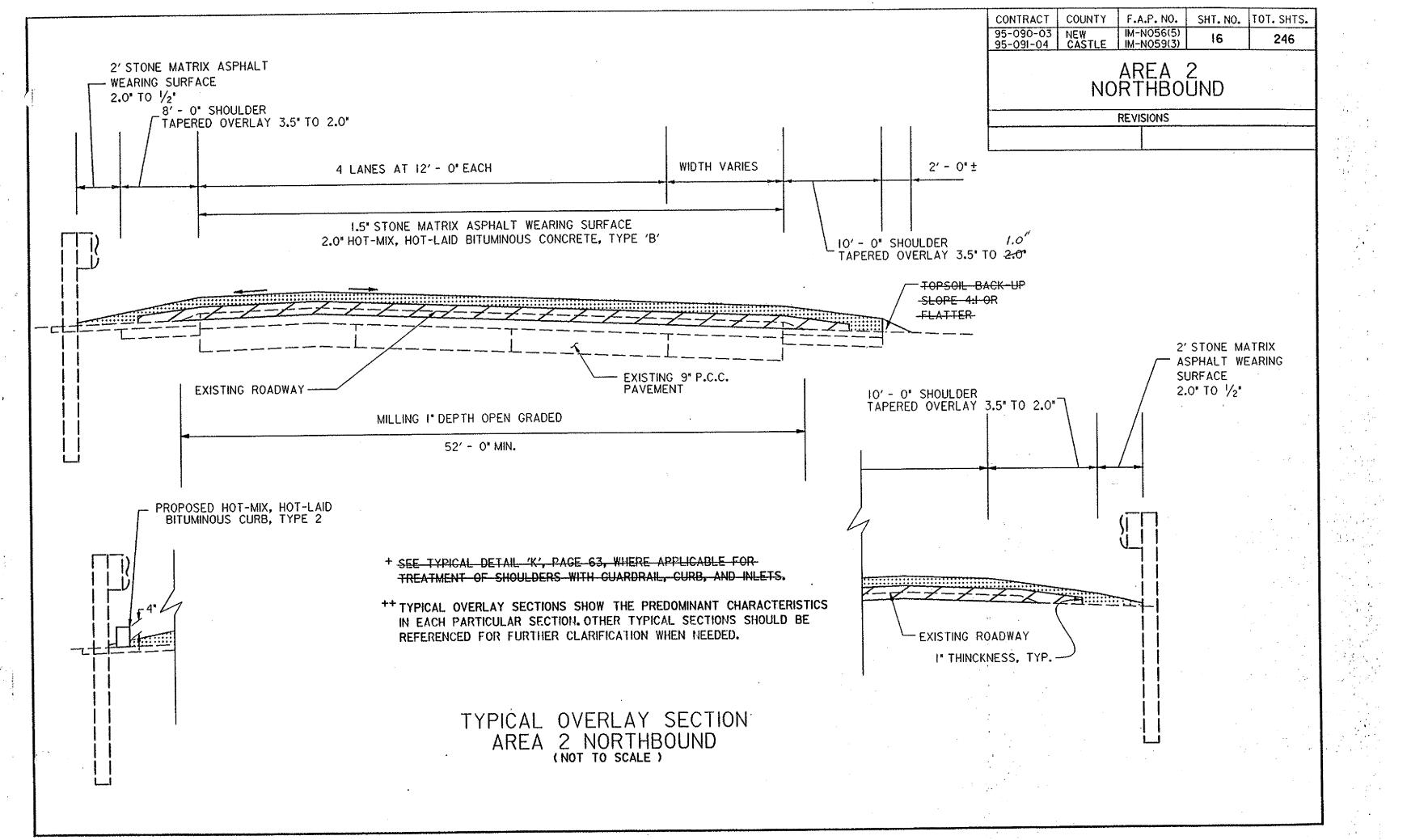
CONTRACT	COUNTY	F.A.P. NO.		TOT. SHTS.					
95-090-03 95-091-04	NEW CASTLE	IM-NO56(5) IM-NO59(3)	15	246					
	QUAN	TITY :	SHEET	,					
REVISIONS									
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ALTERNATIVE NO. 1 - TOTAL REPLACEMENT

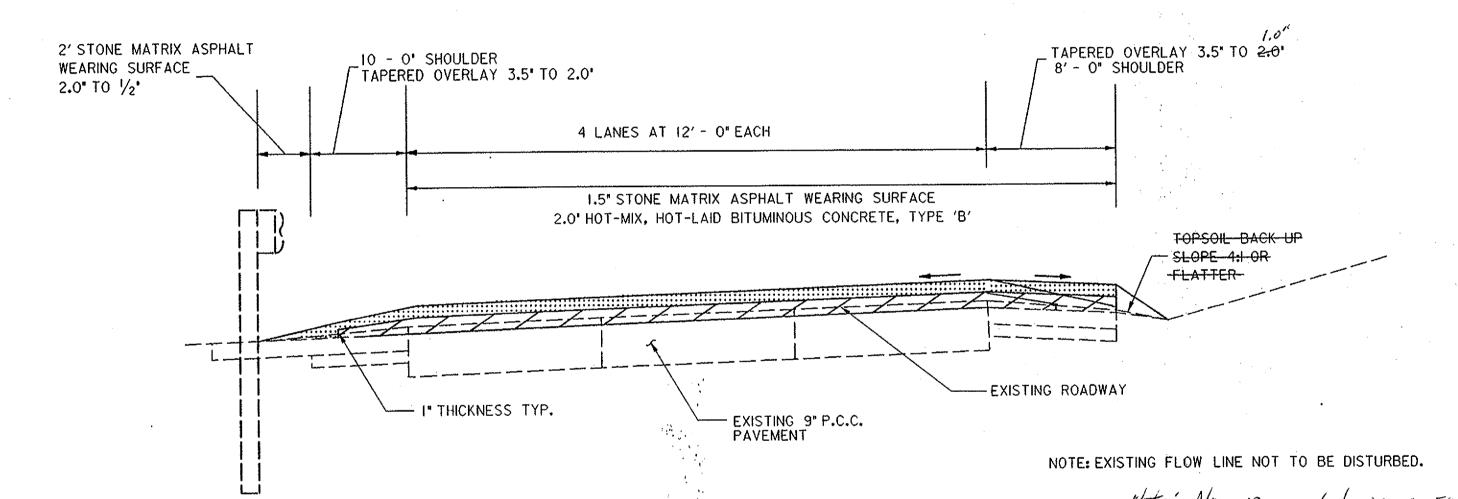
1.7511.44	DESCRIPTION	UNIT	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 7	AREA 8	TOTAL
ITEM #	DESCRIPTION	UNI	ANEA Z	ANEA 3	ANCA 4	ANLA	ANLA O	(TPK)	(I-95)	(I-95)	TOTAL
302002	GRADED AGGREGATE BASE COURSE, TYPE B	SY-IN		4560			3750	3450	674	876	13310
503005	DEFORMED BARS	EA		82			113	88	37	47	367
503006	DOWEL BARS	EA		116			83	44			243
602009	P.C.C. MASONRY APPROACH SLAB, CLASS A	CY		260			287	178	35	45	805
602579	DRILL HOLES AND INSTALL DOWELS	EA		250			212	148	25	25	660
602586	REHABILITATION OF CONCRETE STRUCTURE	CF		50		-	50	50	12	13	175
604000	BAR REINFORCEMENT, EPOXY COATED	LB	***************************************	46170	<u> </u>		51660	32000	6300	8100	144230
758000	REMOVAL OF EXISTING P.C.C. PAVEMENT, CURB, SIDEWALK, ETC.	SY		570			626	384	75	98	1753
762002	SAW CUT, CONCRETE (FULL DEPTH)	LF		205			260	200	60	70	795

*ALTERNATIVE NO. 2 - MILL 10" AND OVERLAY (Selected Atternate)

ITEM #	DESCRIPTION	UNIT	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7 (TPK)	AREA 7 (I-95)	AREA 8 (I-95)	TOTAL
503005	DEFORMED BARS	EΑ		82			113	88	37	47	367
503006	DOWEL BARS	EA		116	***************************************		83	44			243
602009	P.C.C. MASONRY APPROACH SLAB, CLASS A	CY		161			174	106	21	27	489
602586	REHABILITATION OF CONCRETE STRUCTURE	CF	<u></u>	20			20	20	5	5	70
604000	BAR REINFORCEMENT, EPOXY COATED	LB		2385	·		2610	1590	320	400	7305
760001	PAVEMENT MILLING, CONCRETE	SY-IN		5700			6265	3840	750	975	17530
762003	SAWCUT, CONCRETE (PARTIAL DEPTH)	LF		205			260	200	60	70	795
				<u> </u>				<u> </u>			



CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHTS.
95-090-03 95-091-04	NEW CASTLE	IM-N056(5) IM-N059(3)	17	246
	SC	AREA OUTHBO	2 UND	
		REVISIONS		
		,		



TYPICAL OVERLAY SECTION AREA 2 SOUTHBOUND

(NOT TO SCALE)

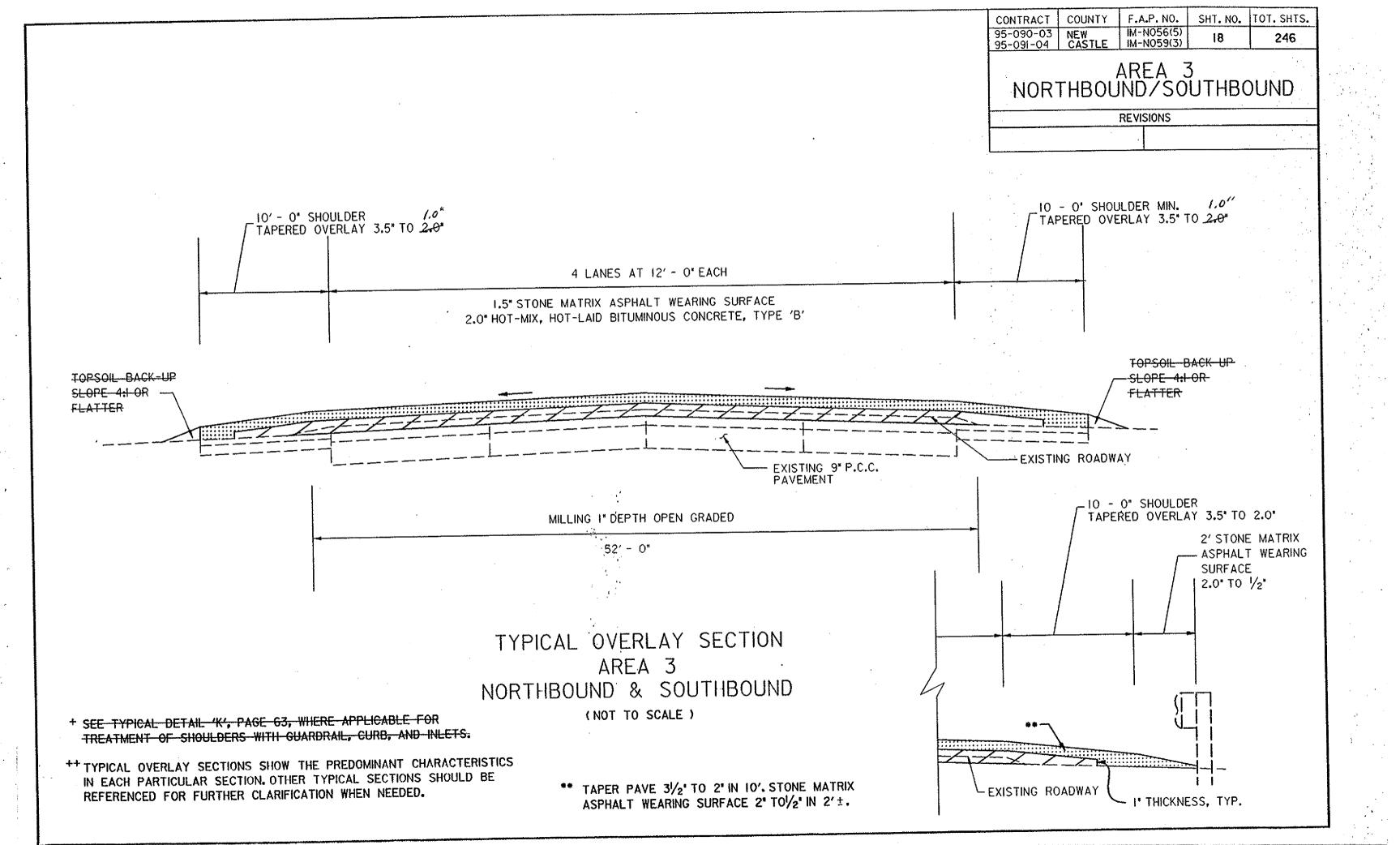
* SEE TYPICAL DETAIL 'K', PAGE 63, WHERE APPLICABLE FOR TREATMENT OF SHOULDERS WITH GUARDRAIL, CURB, AND INLETS.

++ TYPICAL OVERLAY SECTIONS SHOW THE PREDOMINANT CHARACTERISTICS IN EACH PARTICULAR SECTION. OTHER TYPICAL SECTIONS SHOULD BE REFERENCED FOR FURTHER CLARIFICATION WHEN NEEDED.

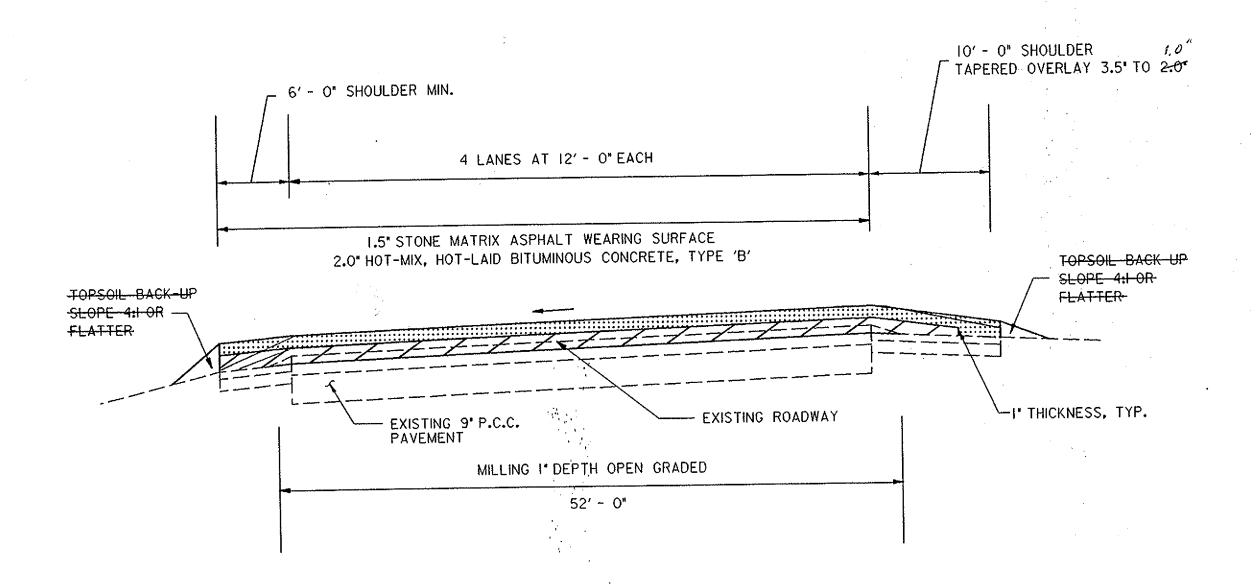
Hote: No open graded waving surface is present in this area so milling was untited to topering at limits and at bridges for dearance.

NOTE

EXISTING 2' MAINTENANCE APRON THAT ARE DISTURBED FROM ADJUSTING GUARDRAIL OR REPLACING CURB SHALL BE REMOVED AND REPLACED WITH I' OF HOT-MIX, HOT LAID BITUMINOUS CONCRETE, TYPE 'C' (SEE DETAIL PAGE NO. 63)



CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	тот. знтѕ.					
95-090-03 95-091-04	NEW CASTLE	IM-N056(5) IM-N059(3)	19	246					
AREA 4									
NORTHBOUND/SOUTHBOUND									
REVISIONS									



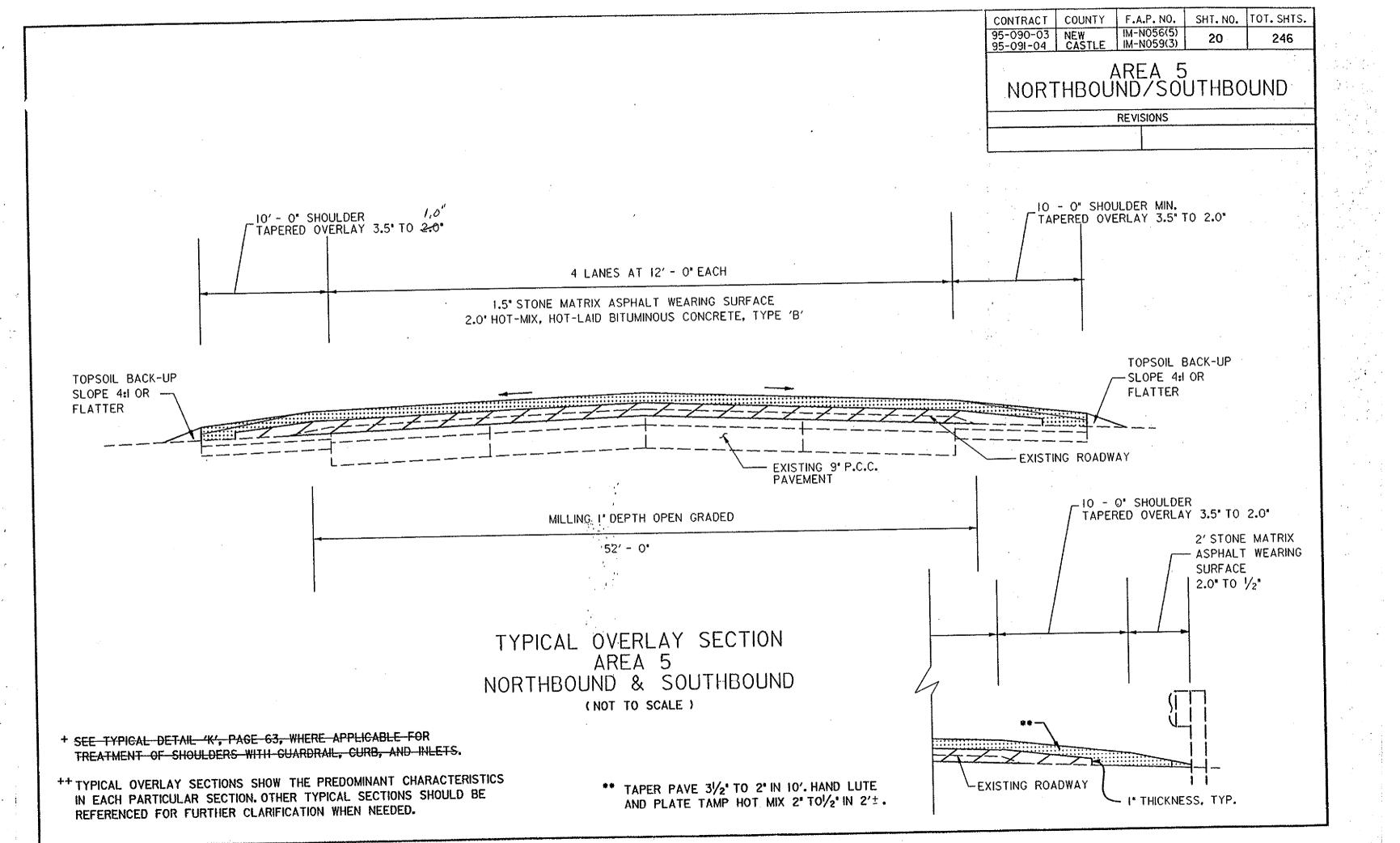
TYPICAL OVERLAY SECTION

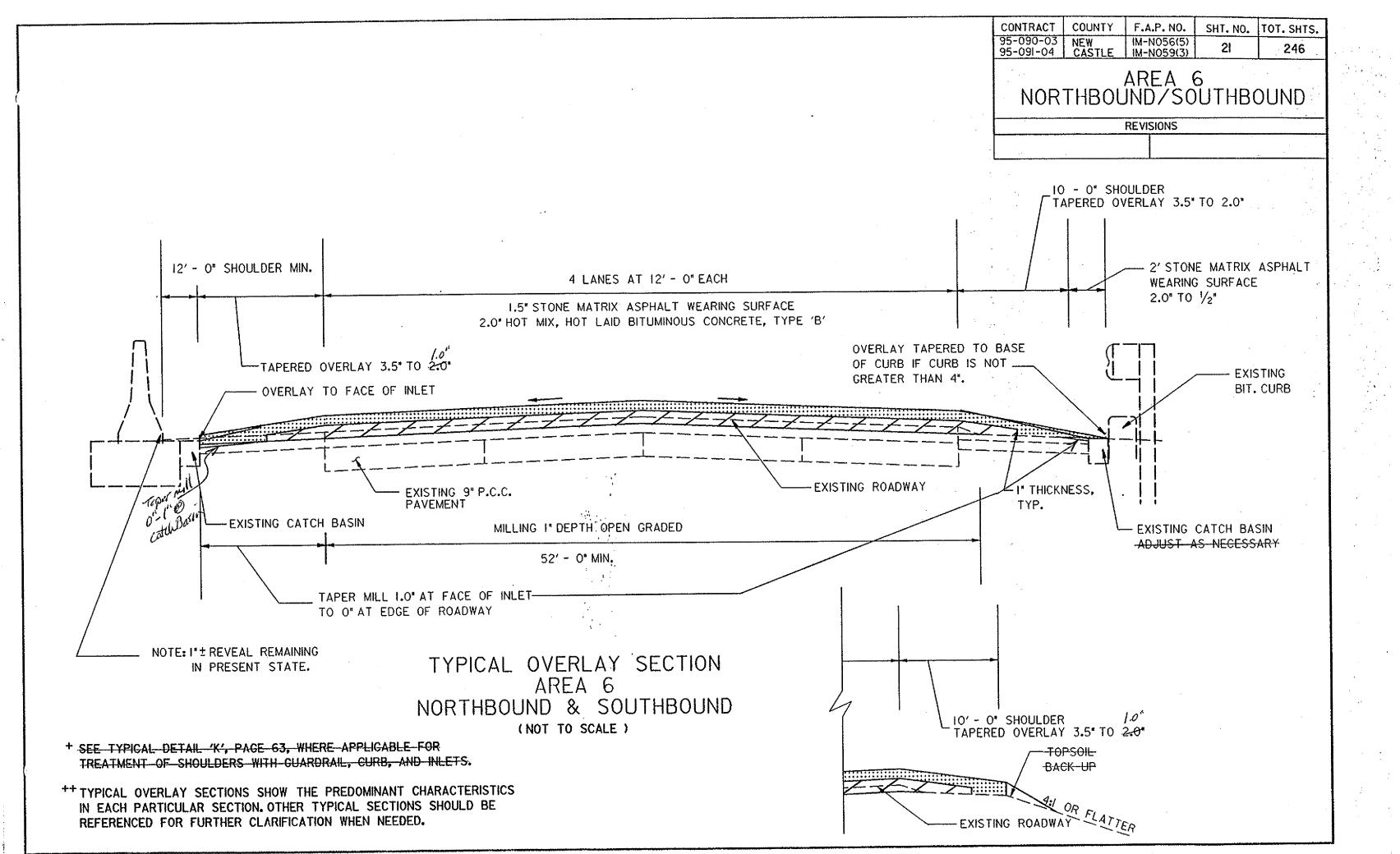
AREA 4

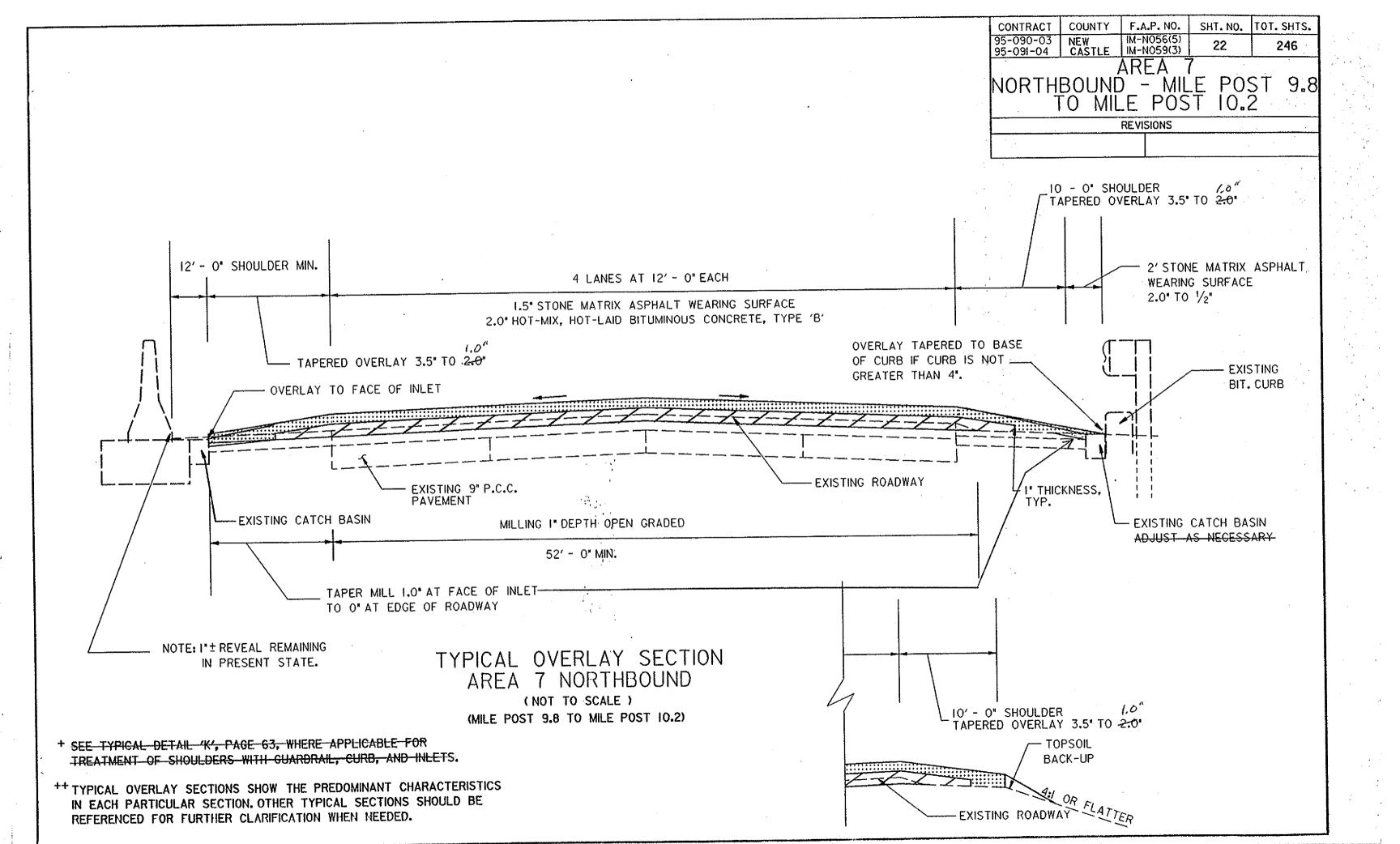
NORTHBOUND & SOUTHBOUND

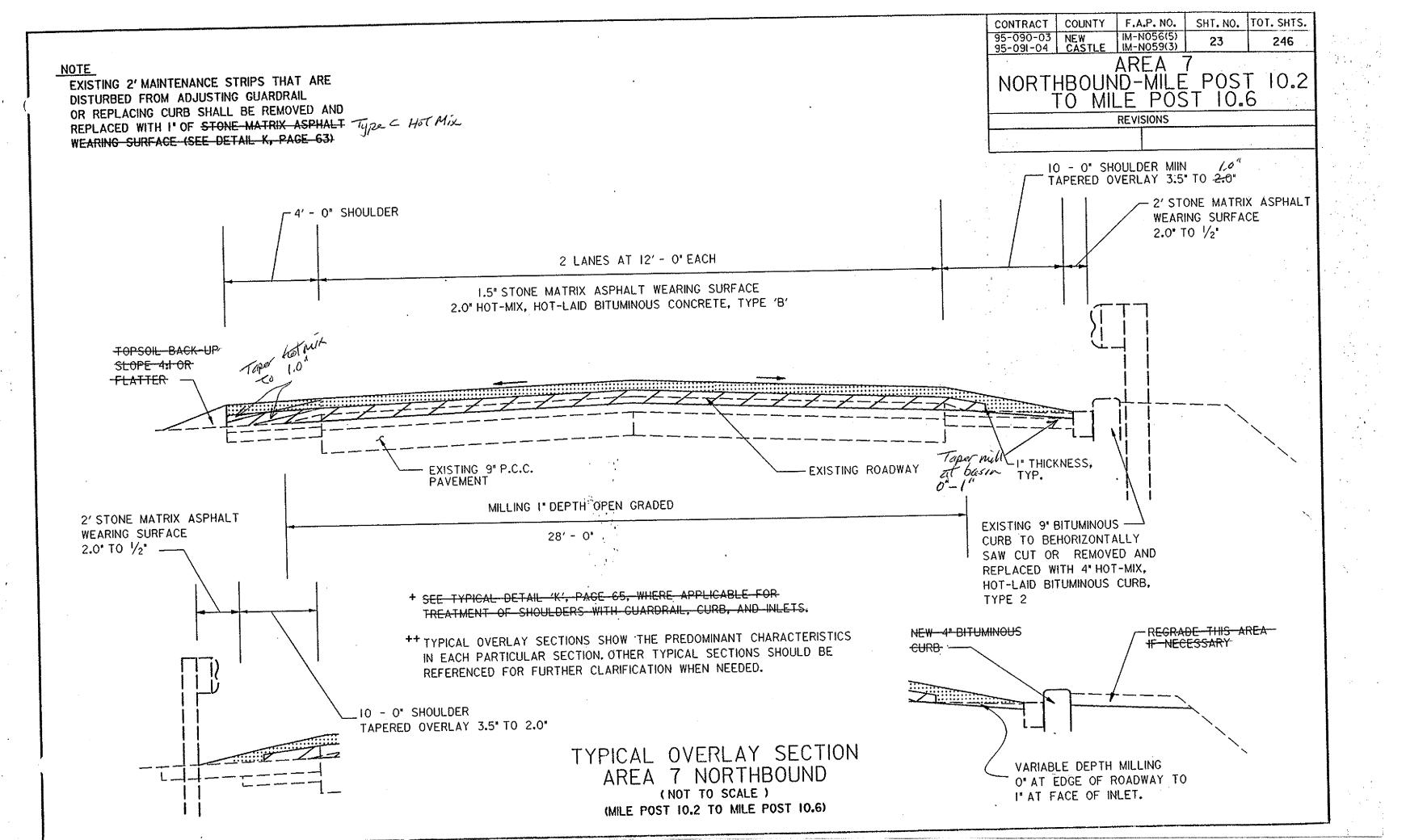
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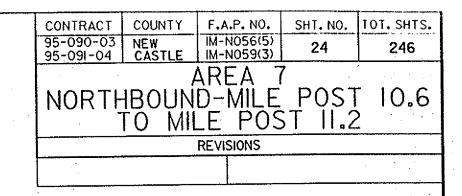
- + SEE TYPICAL DETAIL 'K', PAGE 63, WHERE APPLICABLE FOR TREATMENT OF SHOULDERS WITH GUARDRAIL, CURB, AND INLETS.
- ++ TYPICAL OVERLAY SECTIONS SHOW THE PREDOMINANT CHARACTERISTICS IN EACH PARTICULAR SECTION. OTHER TYPICAL SECTIONS SHOULD BE REFERENCED FOR FURTHER CLARIFICATION WHEN NEEDED.

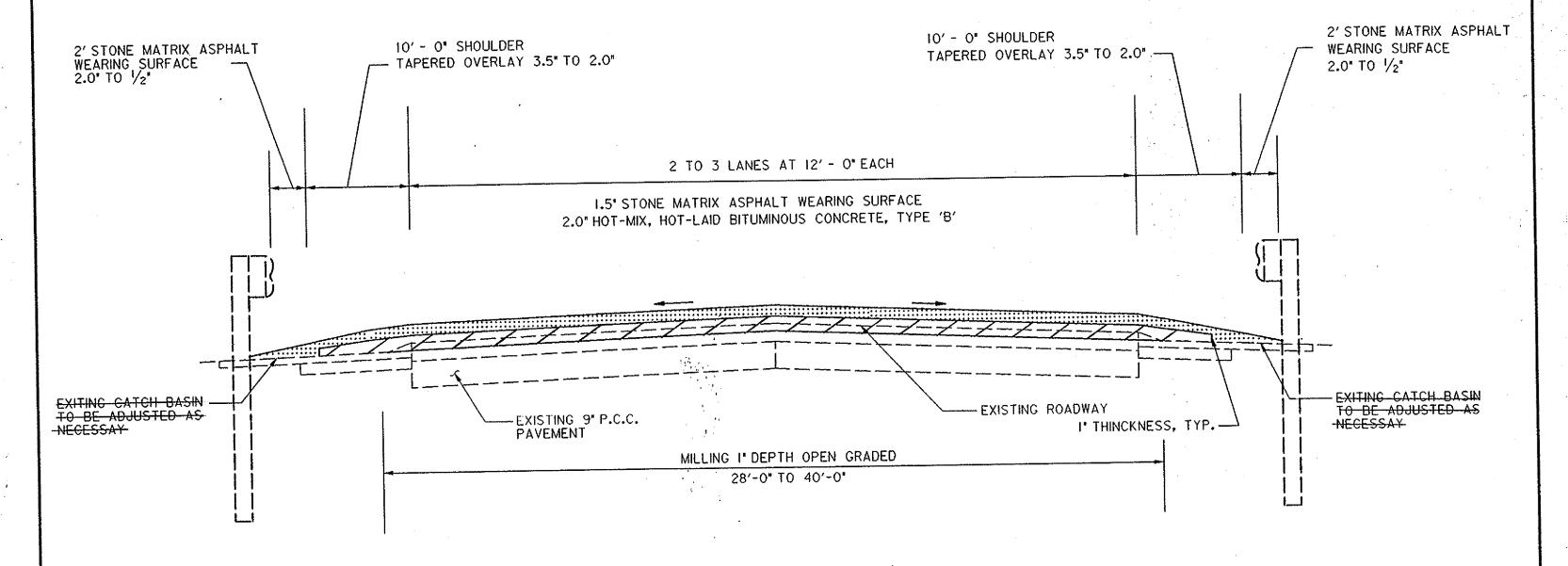












NOTE

EXISTING 2' MAINTENANCE APRON THAT ARE DISTURBED FROM ADJUSTING GUARDRAIL OR REPLACING CURB SHALL BE REMOVED AND REPLACED WITH 1° OF HOT-MIX, HOT LAID BITUMINOUS CONCRETE, TYPE 'C'. (SEE DETAIL PAGE NO. 63).

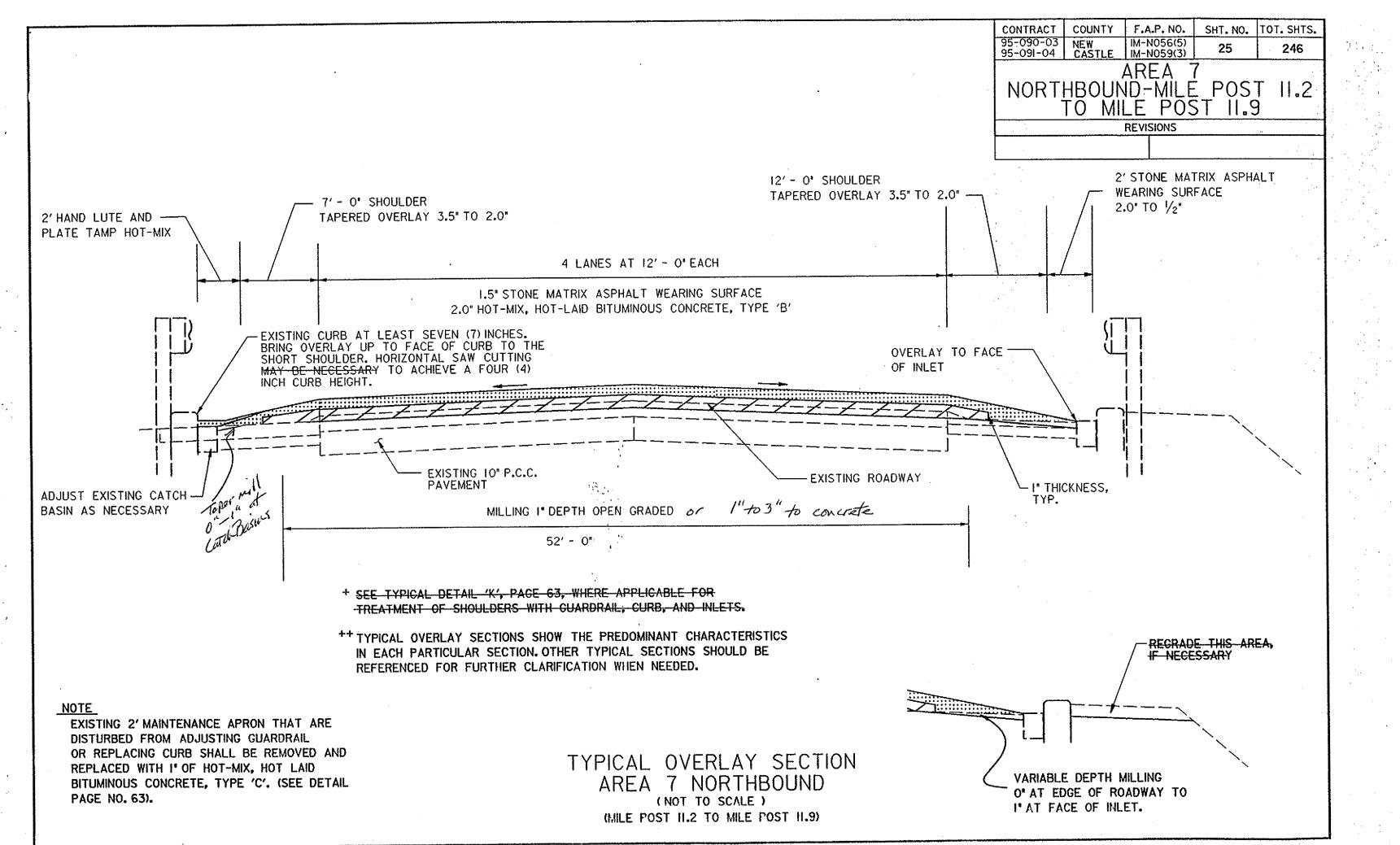
TYPICAL OVERLAY SECTION

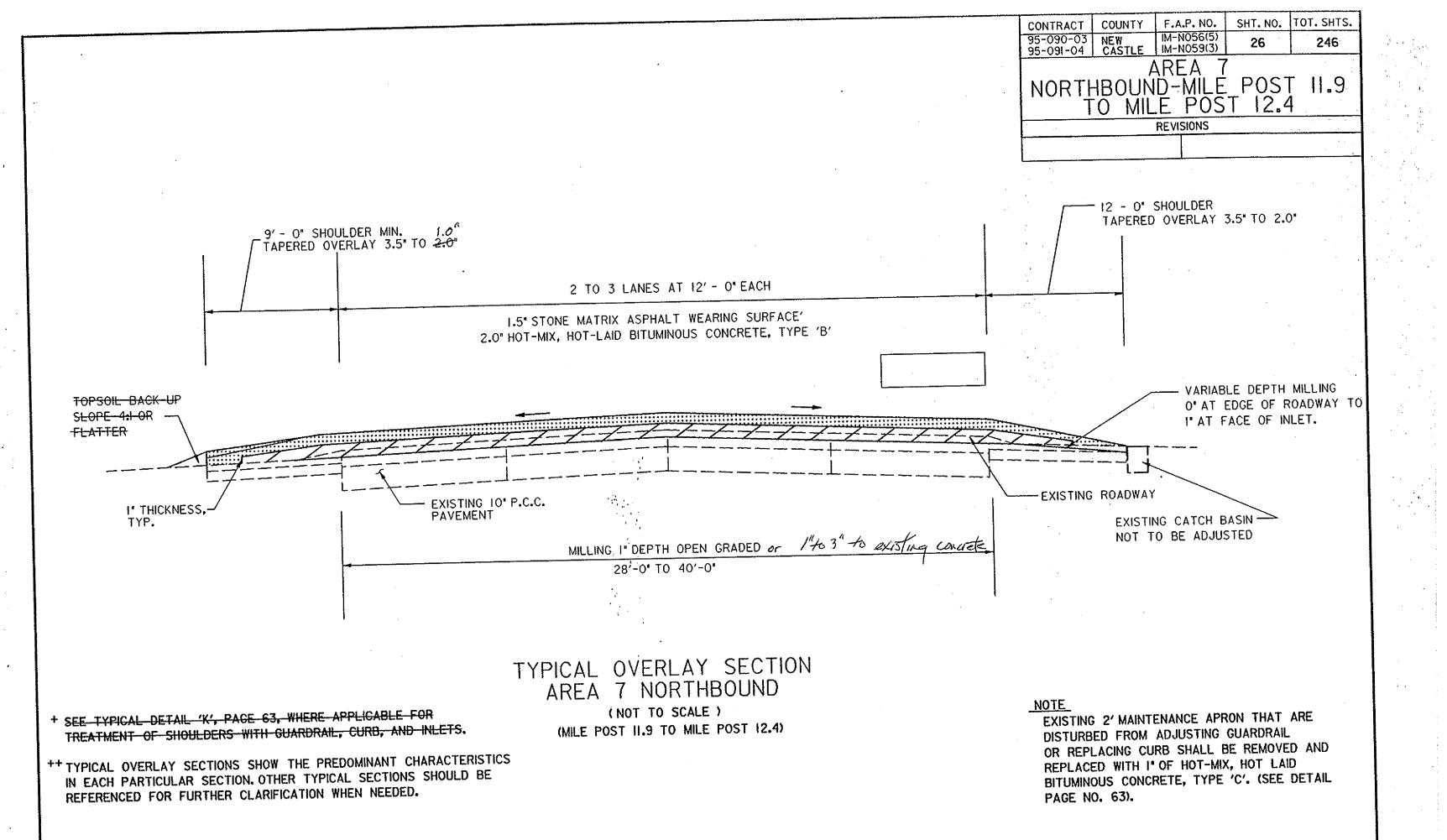
AREA 7 NORTHBOUND

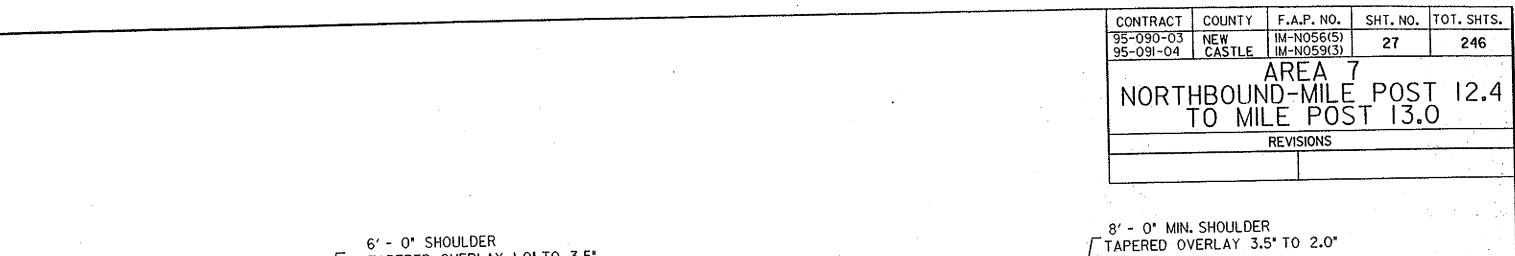
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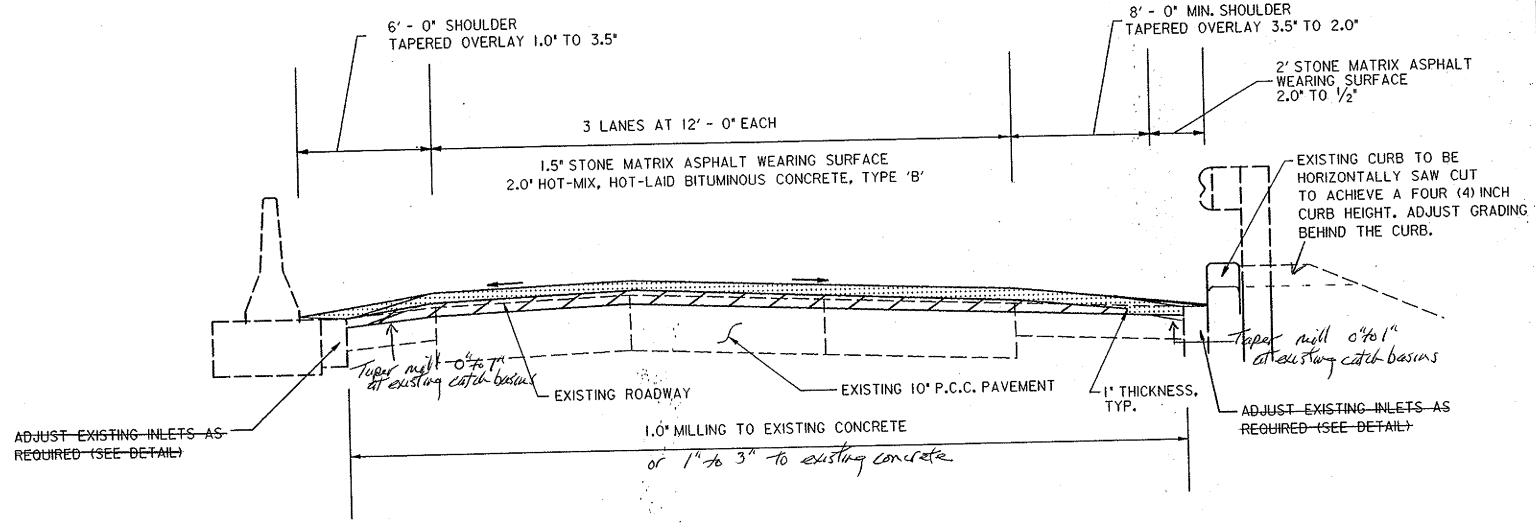
(MILE POST 10.6 TO MILE POST 11.2)

- + SEE TYPICAL DETAIL 'K', PAGE 63, WHERE APPLICABLE FOR TREATMENT OF SHOULDERS WITH GUARDRAIL, CURB, AND INLETS.
- ++ TYPICAL OVERLAY SECTIONS SHOW THE PREDOMINANT CHARACTERISTICS IN EACH PARTICULAR SECTION. OTHER TYPICAL SECTIONS SHOULD BE REFERENCED FOR FURTHER CLARIFICATION WHEN NEEDED.









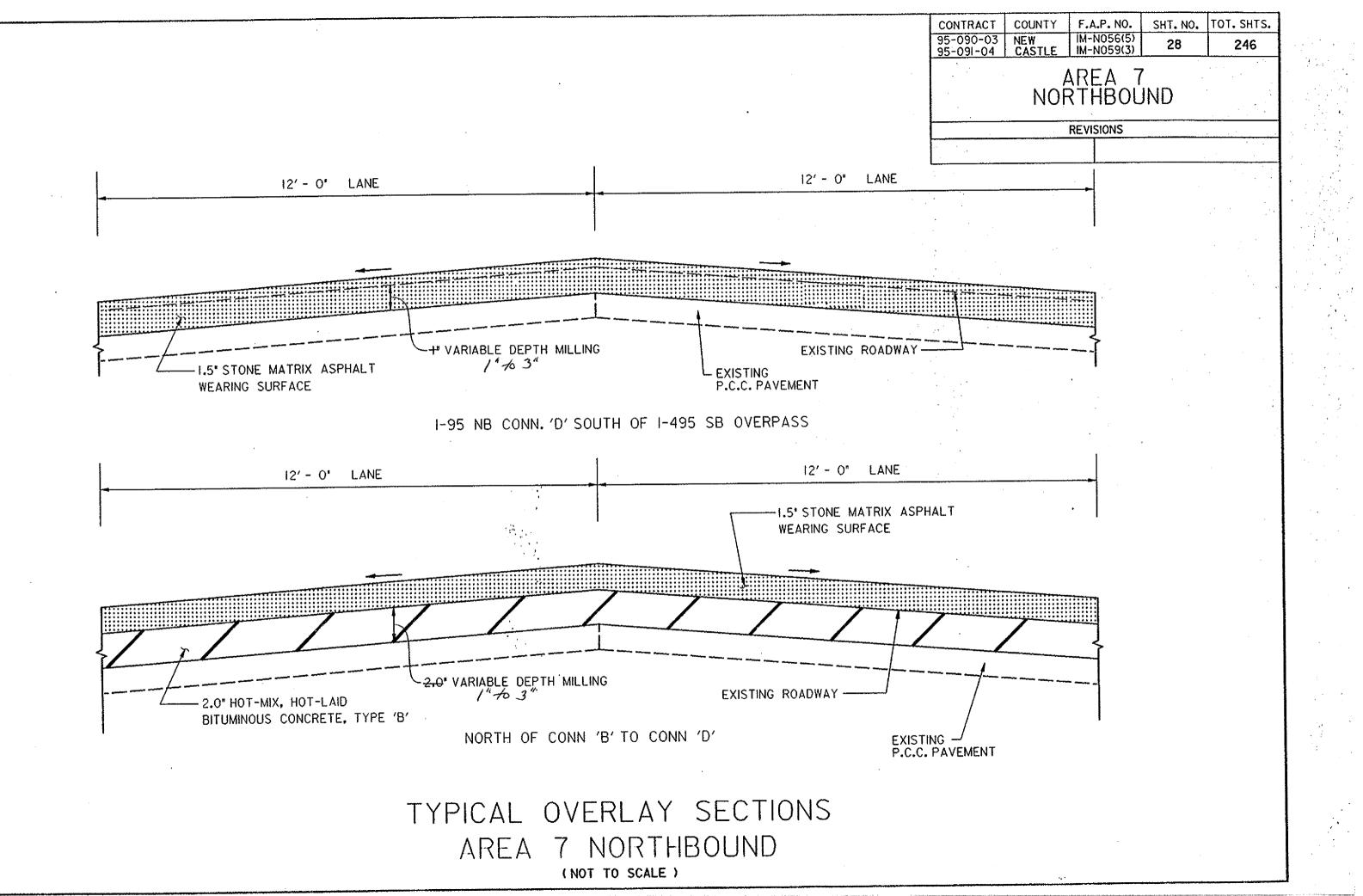
- + SEE TYPICAL DETAIL 'K', PAGE 63, WHERE APPLICABLE FOR TREATMENT OF SHOULDERS WITH GUARDRAIL, CURB, AND INLETS.
- ** TYPICAL OVERLAY SECTIONS SHOW THE PREDOMINANT CHARACTERISTICS IN EACH PARTICULAR SECTION. OTHER TYPICAL SECTIONS SHOULD BE REFERENCED FOR FURTHER CLARIFICATION WHEN NEEDED.

TYPICAL OVERLAY SECTION AREA 7 NORTHBOUND

(NOT TO SCALE)
(MILE POST 12.4 TO MILE POST 13.0)

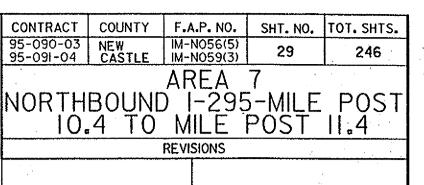
NOTE

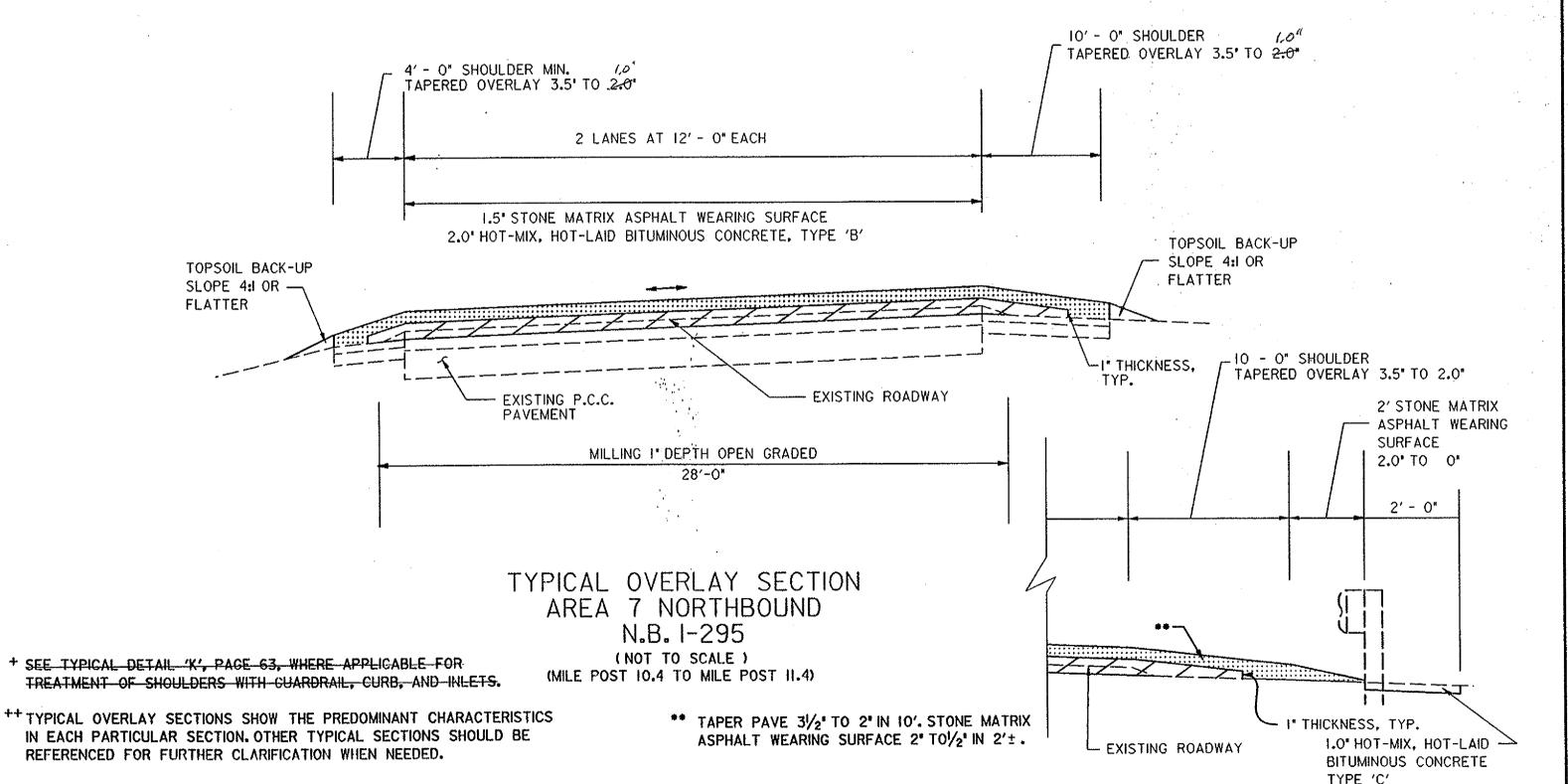
EXISTING 2' MAINTENANCE APRON THAT ARE DISTURBED FROM ADJUSTING GUARDRAIL OR REPLACING CURB SHALL BE REMOVED AND REPLACED WITH I' OF HOT-MIX, HOT LAID BITUMINOUS CONCRETE, TYPE 'C'. (SEE DETAIL PAGE NO. 63).

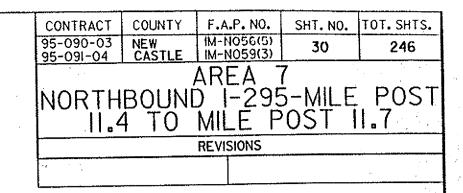


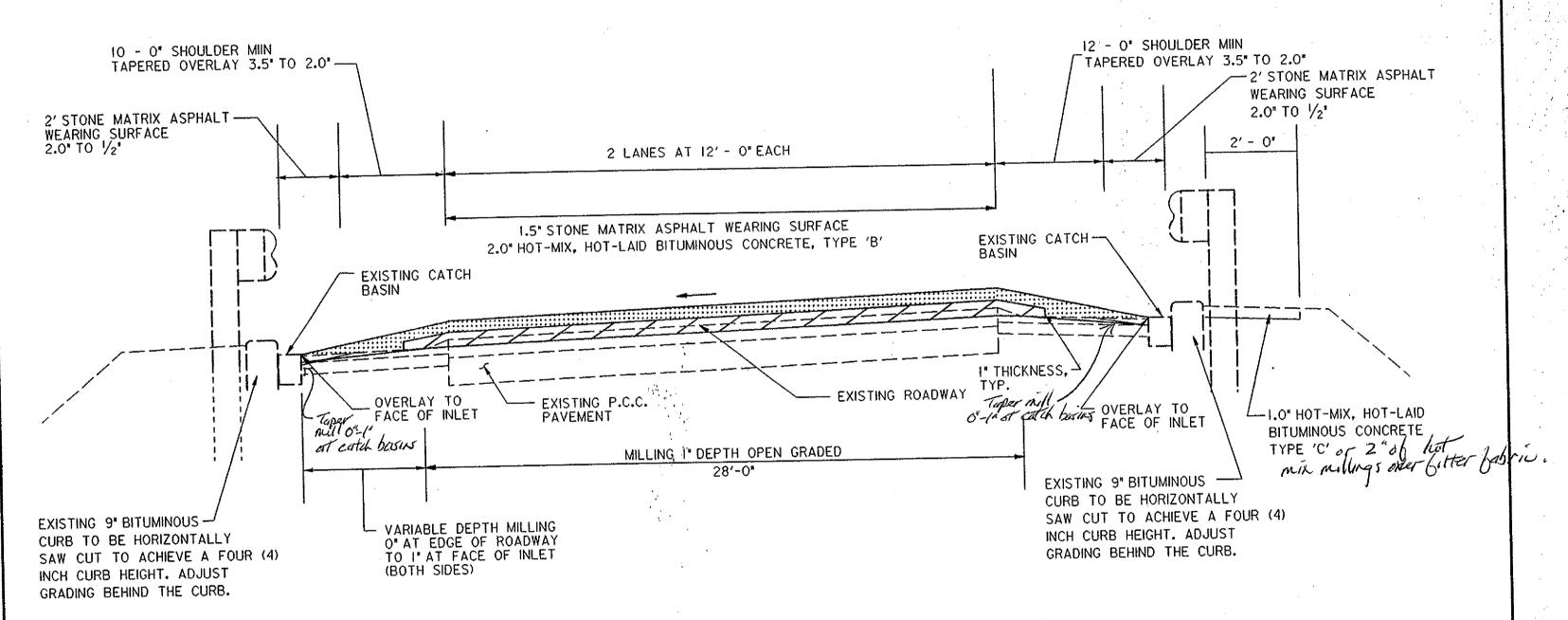
NOTE

EXISTING 2' MAINTENANCE APRON THAT ARE DISTURBED FROM ADJUSTING GUARDRAIL OR REPLACING CURB SHALL BE REMOVED AND REPLACED WITH I' OF HOT-MIX, HOT LAID BITUMINOUS CONCRETE, TYPE 'C'. (SEE DETAIL PAGE NO.63).









+ SEE TYPICAL DETAIL 'K', PAGE 63, WHERE APPLICABLE FOR TREATMENT OF SHOULDERS WITH GUARDRAIL, CURB, AND INLETS.

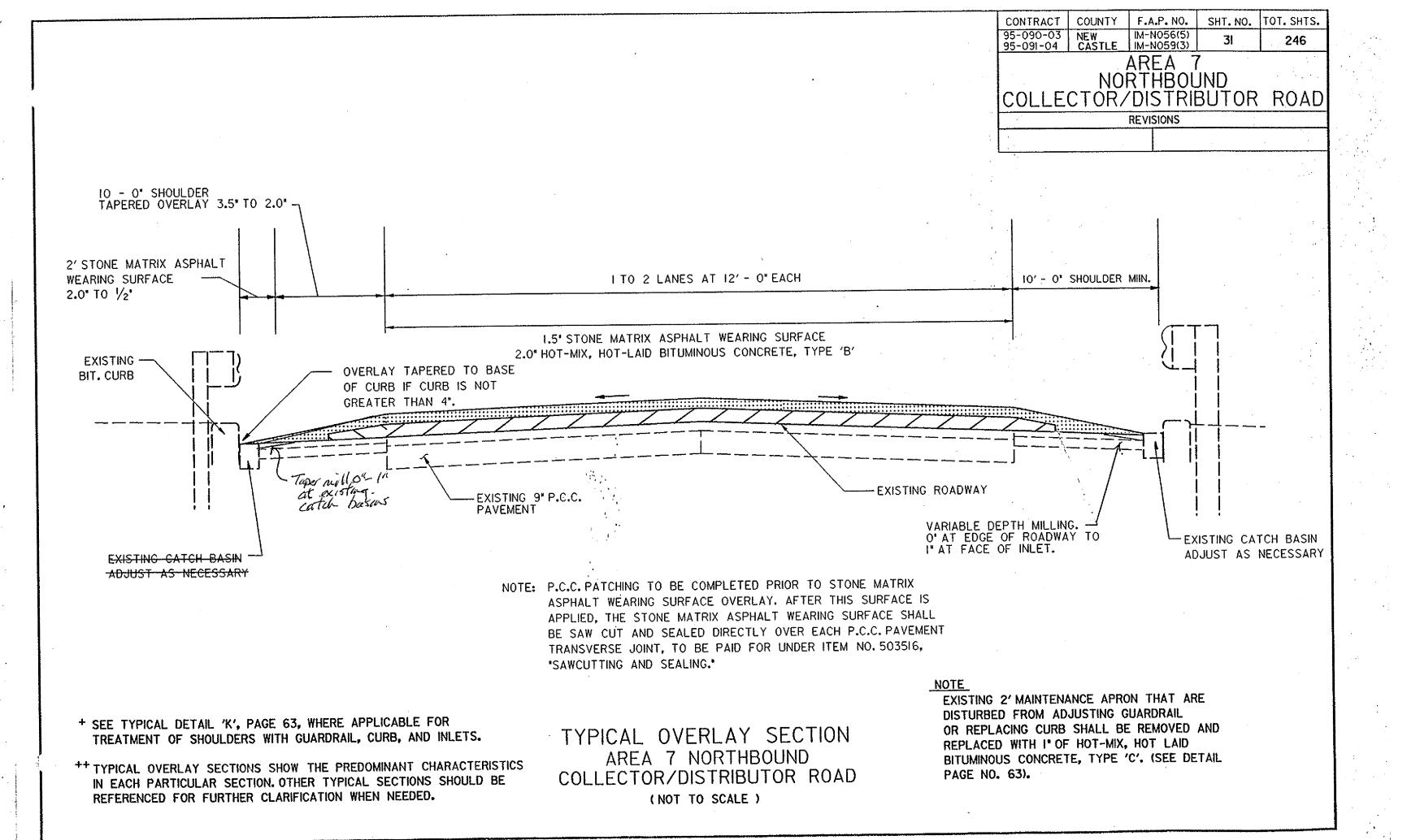
++ TYPICAL OVERLAY SECTIONS SHOW THE PREDOMINANT CHARACTERISTICS IN EACH PARTICULAR SECTION. OTHER TYPICAL SECTIONS SHOULD BE REFERENCED FOR FURTHER CLARIFICATION WHEN NEEDED.

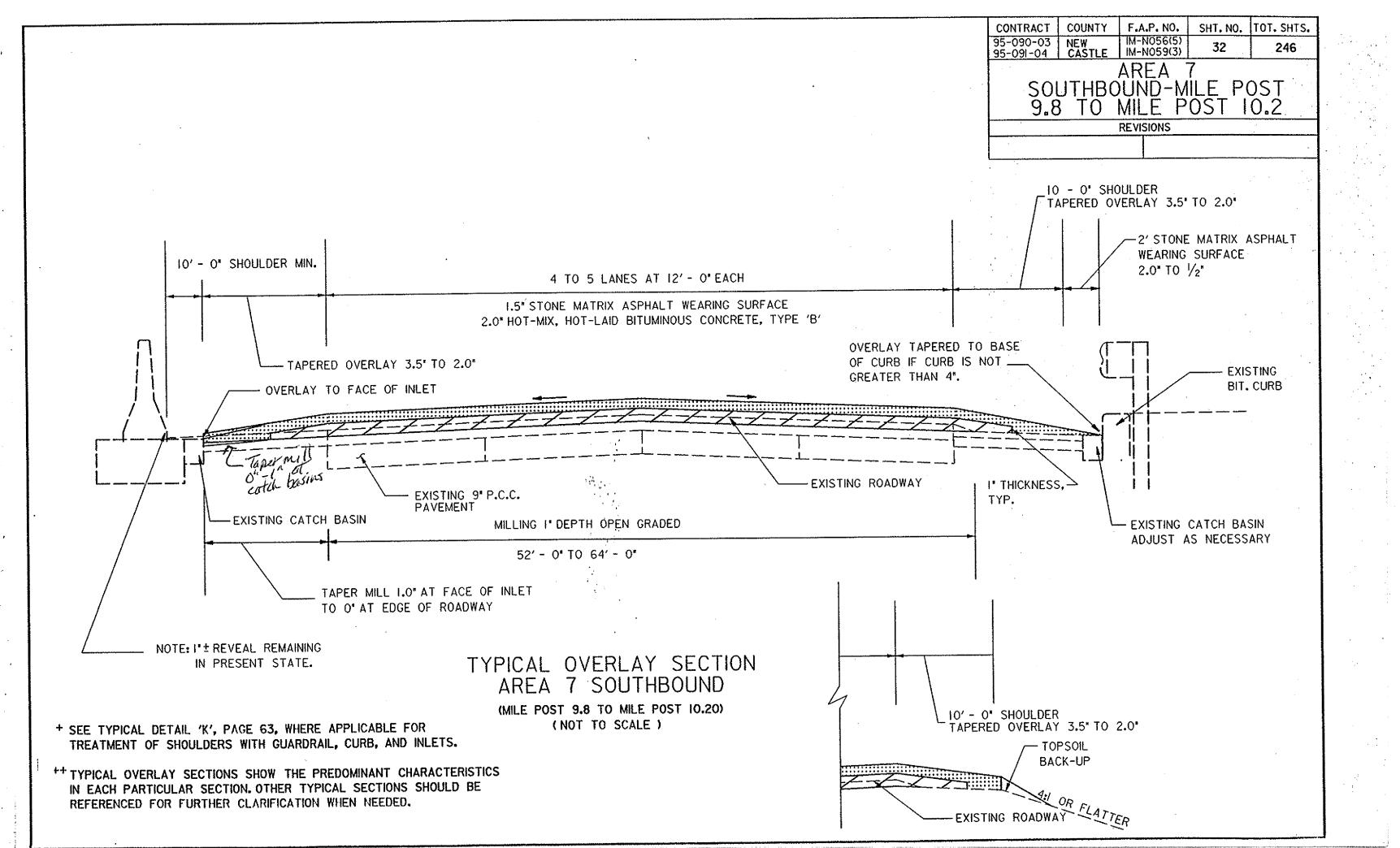
TYPICAL OVERLAY SECTION AREA 7 NORTHBOUND N.B. I-295

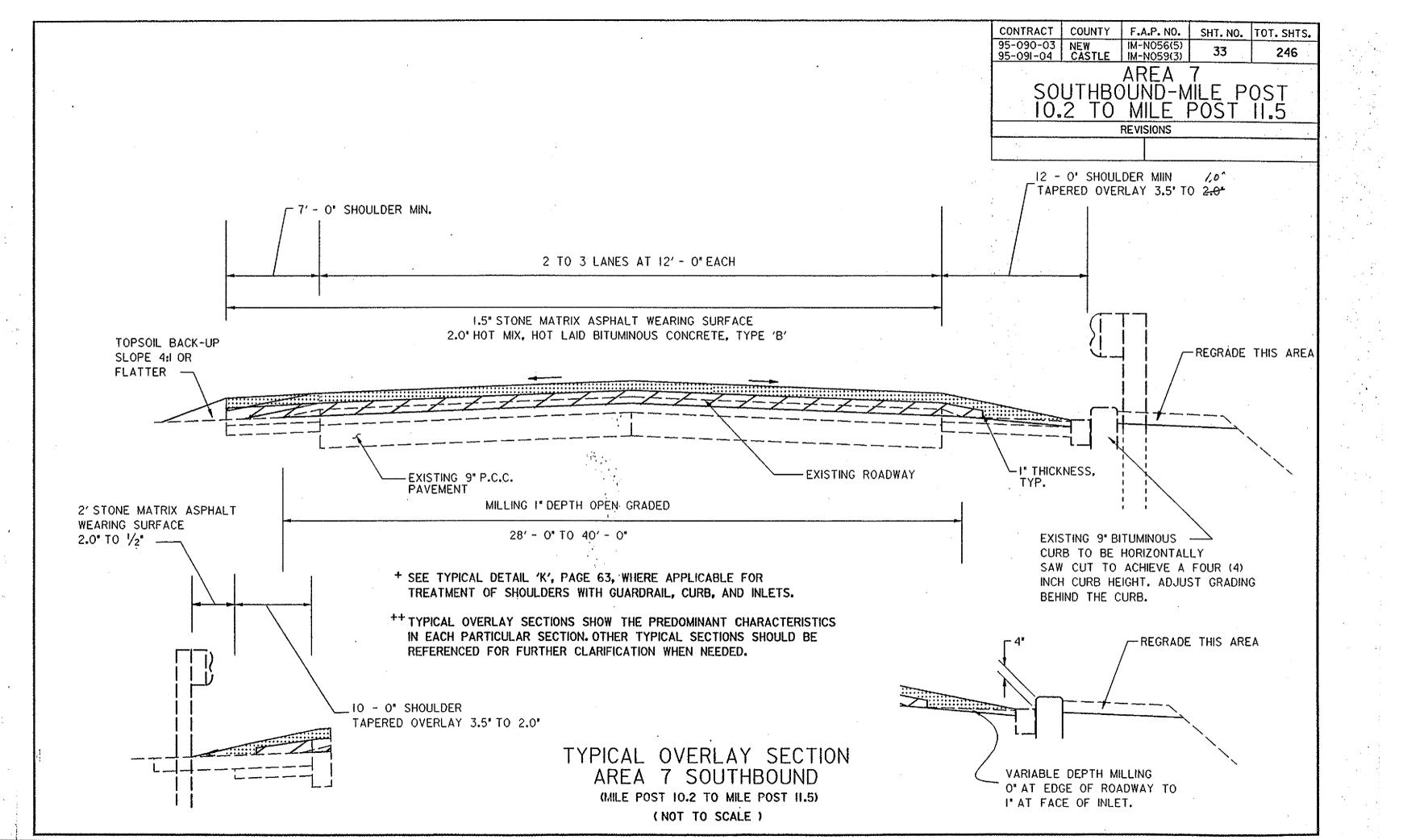
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(MILE POST II.4 TO MILE POST II.7)

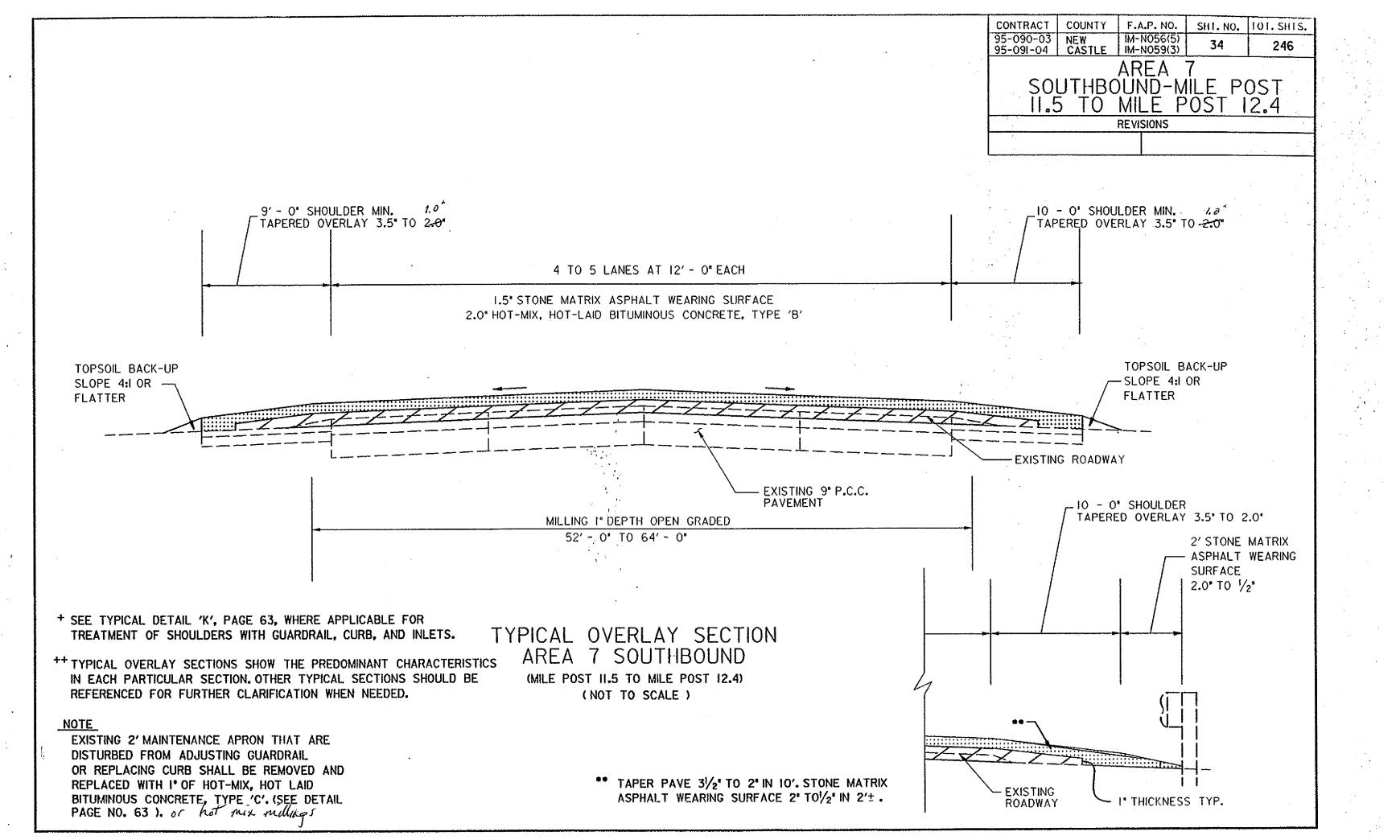
NOTE

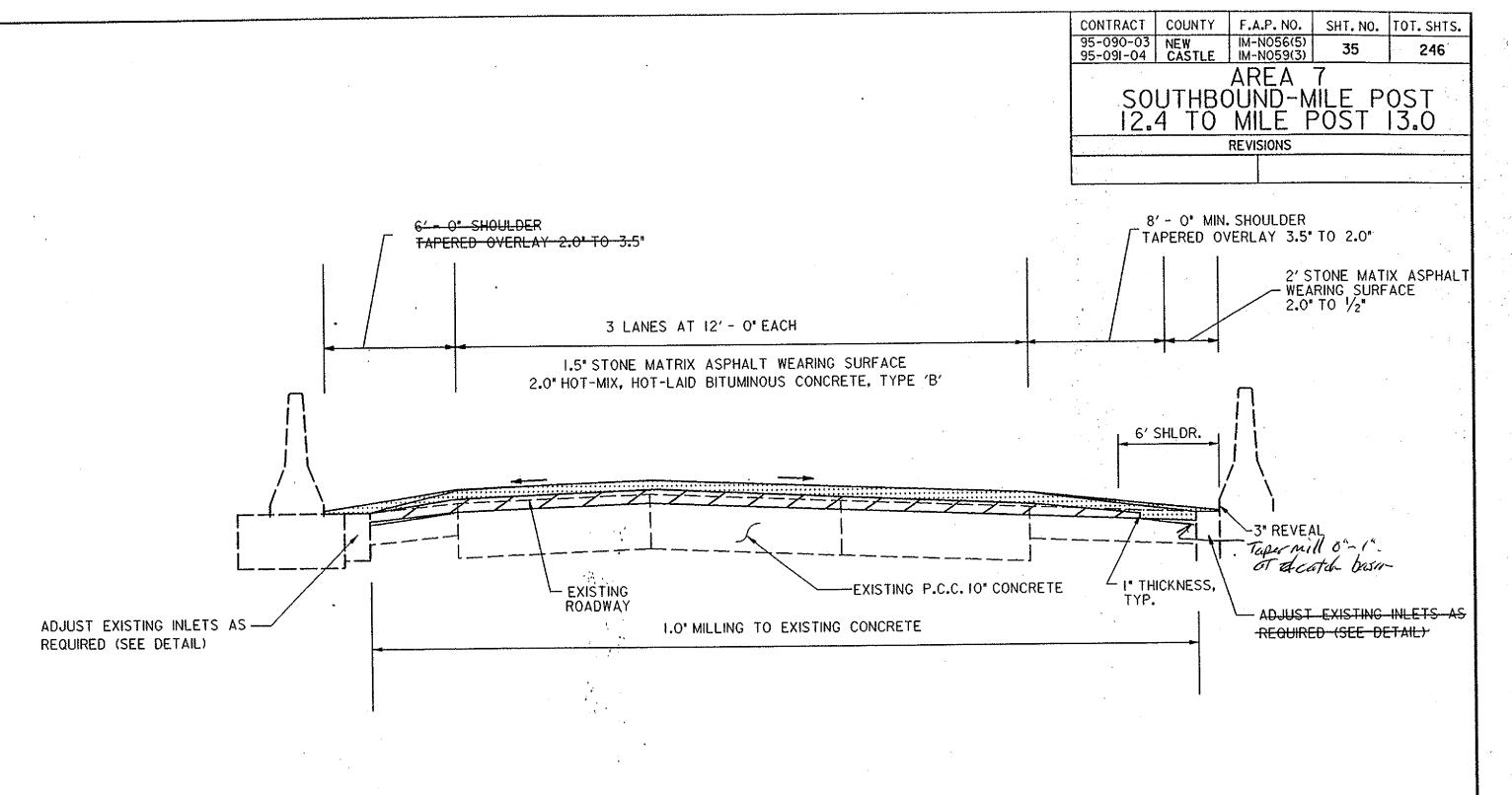
EXISTING 2' MAINTENANCE APRONS THAT ARE DISTURBED FROM ADJUSTING GUARDRAIL OR REPLACING CURB SHALL BE REMOVED AND REPLACED WITH 1" OF HOT-MIX, HOT LAID BITUMINOUS CONCRETE, TYPE 'C'. (SEE DETAIL PAGE NO. 63). or hot marmilings.











+ SEE TYPICAL DETAIL 'K', PAGE 65, WHERE APPLICABLE FOR TREATMENT OF SHOULDERS WITH GUARDRAIL, CURB, AND INLETS.

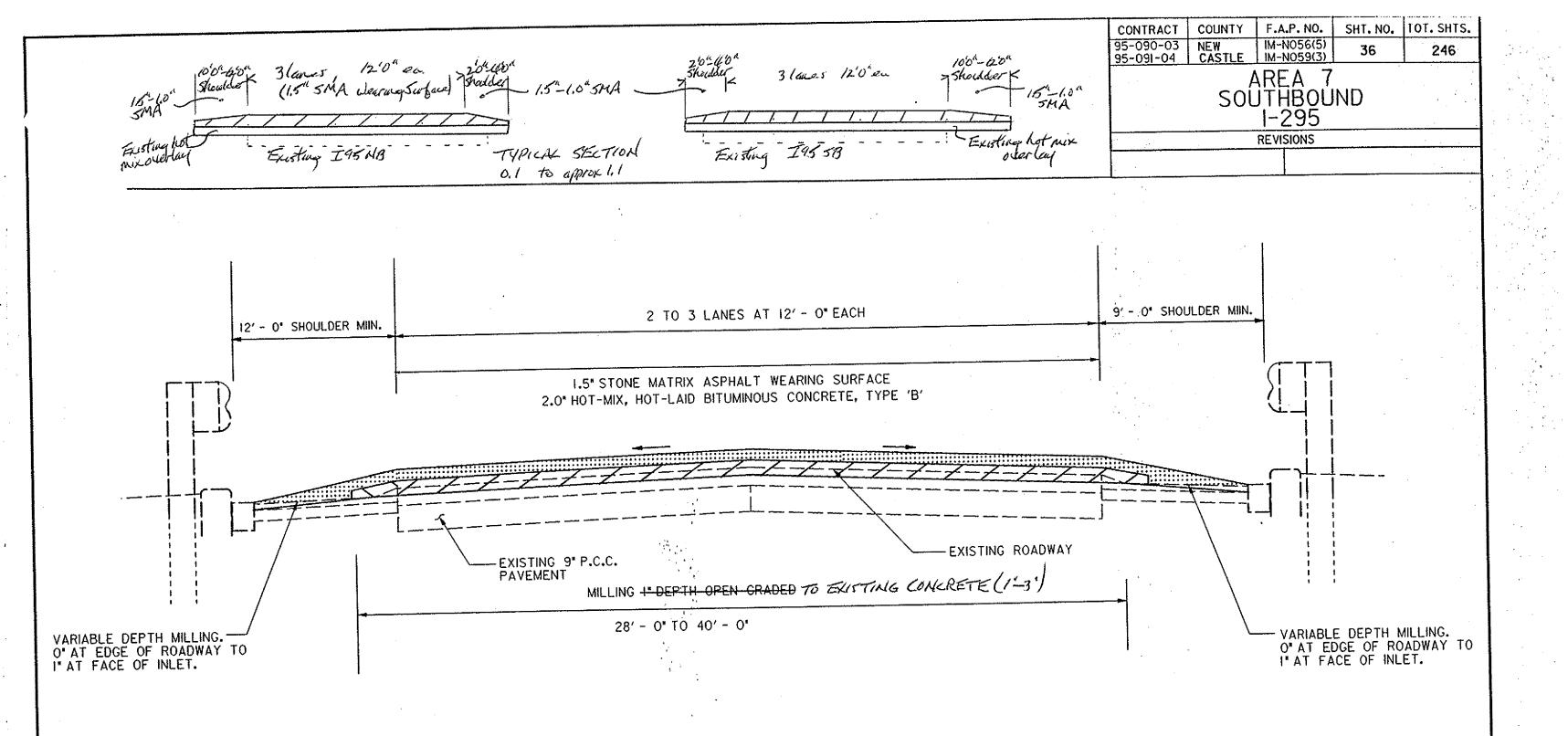
++ TYPICAL OVERLAY SECTIONS SHOW THE PREDOMINANT CHARACTERISTICS IN EACH PARTICULAR SECTION. OTHER TYPICAL SECTIONS SHOULD BE REFERENCED FOR FURTHER CLARIFICATION WHEN NEEDED.

TYPICAL OVERLAY SECTION AREA 7 SOUTHBOUND

(NOT TO SCALE)
(MILE POST 12.4 TO MILE POST 13.0)

NOTE_

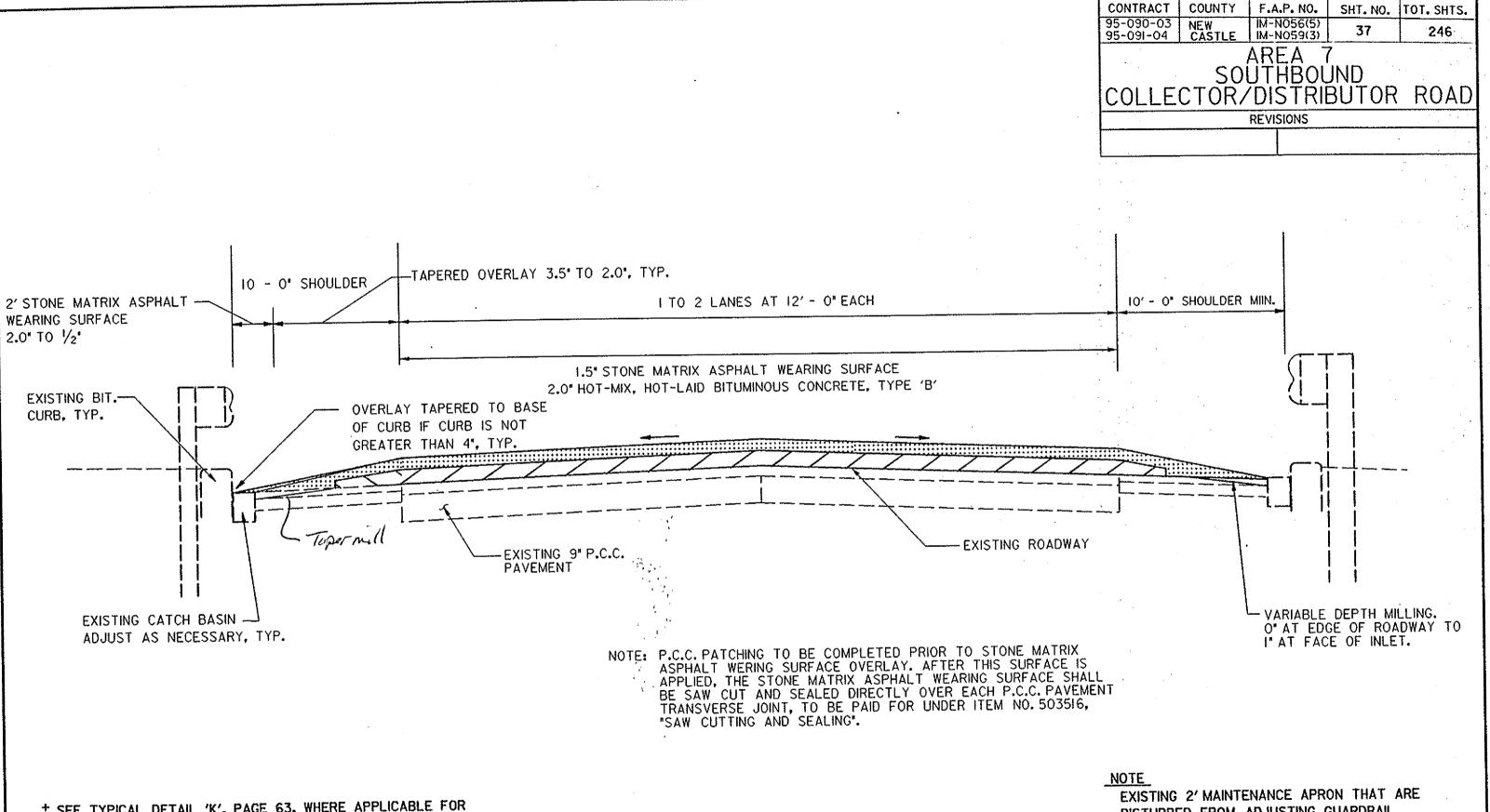
EXISTING 2' MAINTENANCE APRON THAT ARE DISTURBED FROM ADJUSTING GUARDRAIL OR REPLACING CURB SHALL BE REMOVED AND REPLACED WITH 1" OF HOT-MIX, HOT LAID BITUMINOUS CONCRETE, TYPE 'C'. (SEE DETAIL PAGE NO. 63).



TYPICAL OVERLAY SECTION
AREA 7 SOUTHBOUND
1-295
(NOT TO SCALE)

⁺ SEE TYPICAL DETAIL 'K', PAGE 63, WHERE APPLICABLE FOR TREATMENT OF SHOULDERS WITH GUARDRAIL, CURB, AND INLETS.

⁺⁺ TYPICAL OVERLAY SECTIONS SHOW THE PREDOMINANT CHARACTERISTICS IN EACH PARTICULAR SECTION. OTHER TYPICAL SECTIONS SHOULD BE REFERENCED FOR FURTHER CLARIFICATION WHEN NEEDED.



- * SEE TYPICAL DETAIL 'K', PAGE 63, WHERE APPLICABLE FOR TREATMENT OF SHOULDERS WITH GUARDRAIL, CURB, AND INLETS.
- ++ TYPICAL OVERLAY SECTIONS SHOW THE PREDOMINANT CHARACTERISTICS IN EACH PARTICULAR SECTION. OTHER TYPICAL SECTIONS SHOULD BE REFERENCED FOR FURTHER CLARIFICATION WHEN NEEDED.

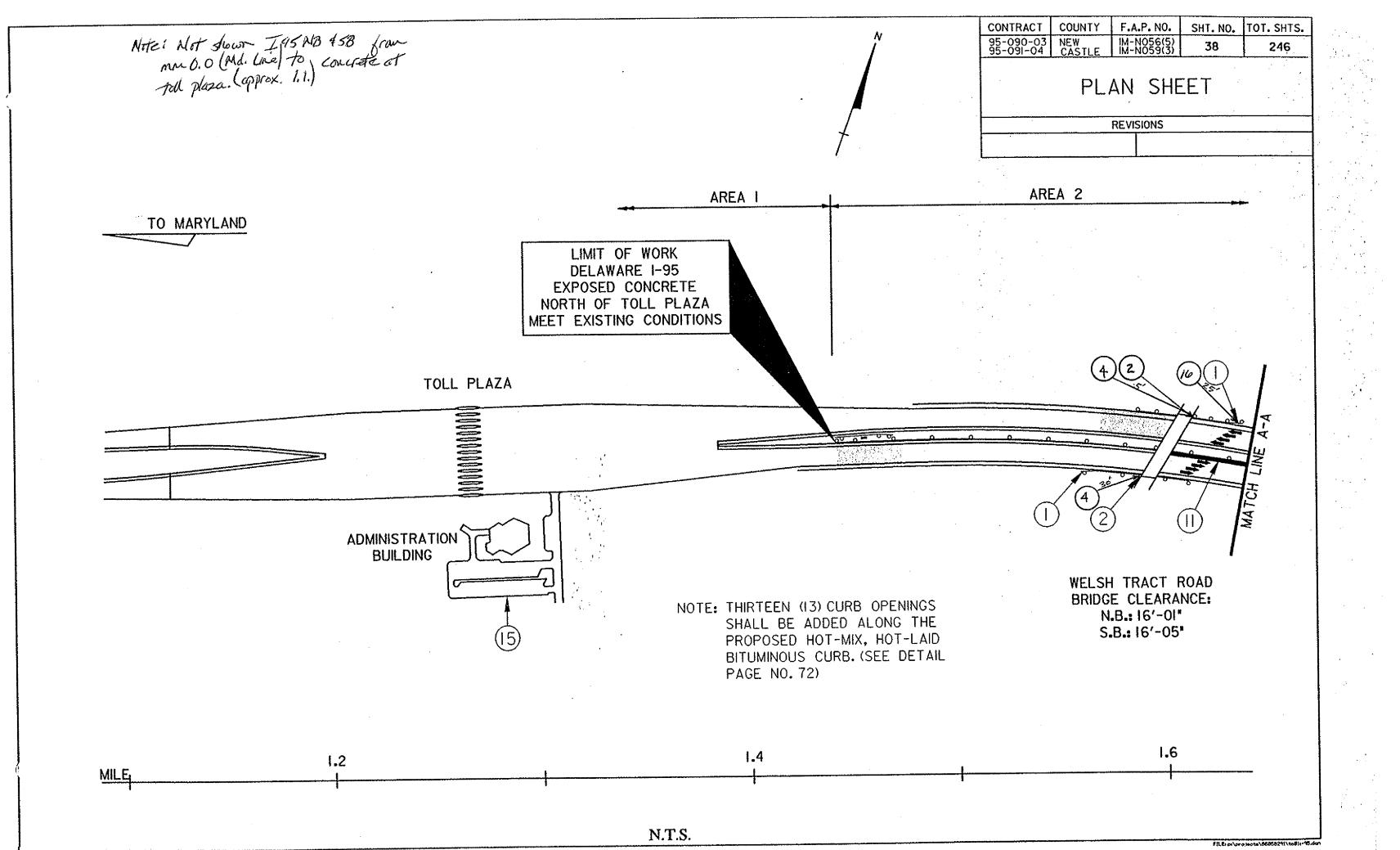
TYPICAL OVERLAY SECTION

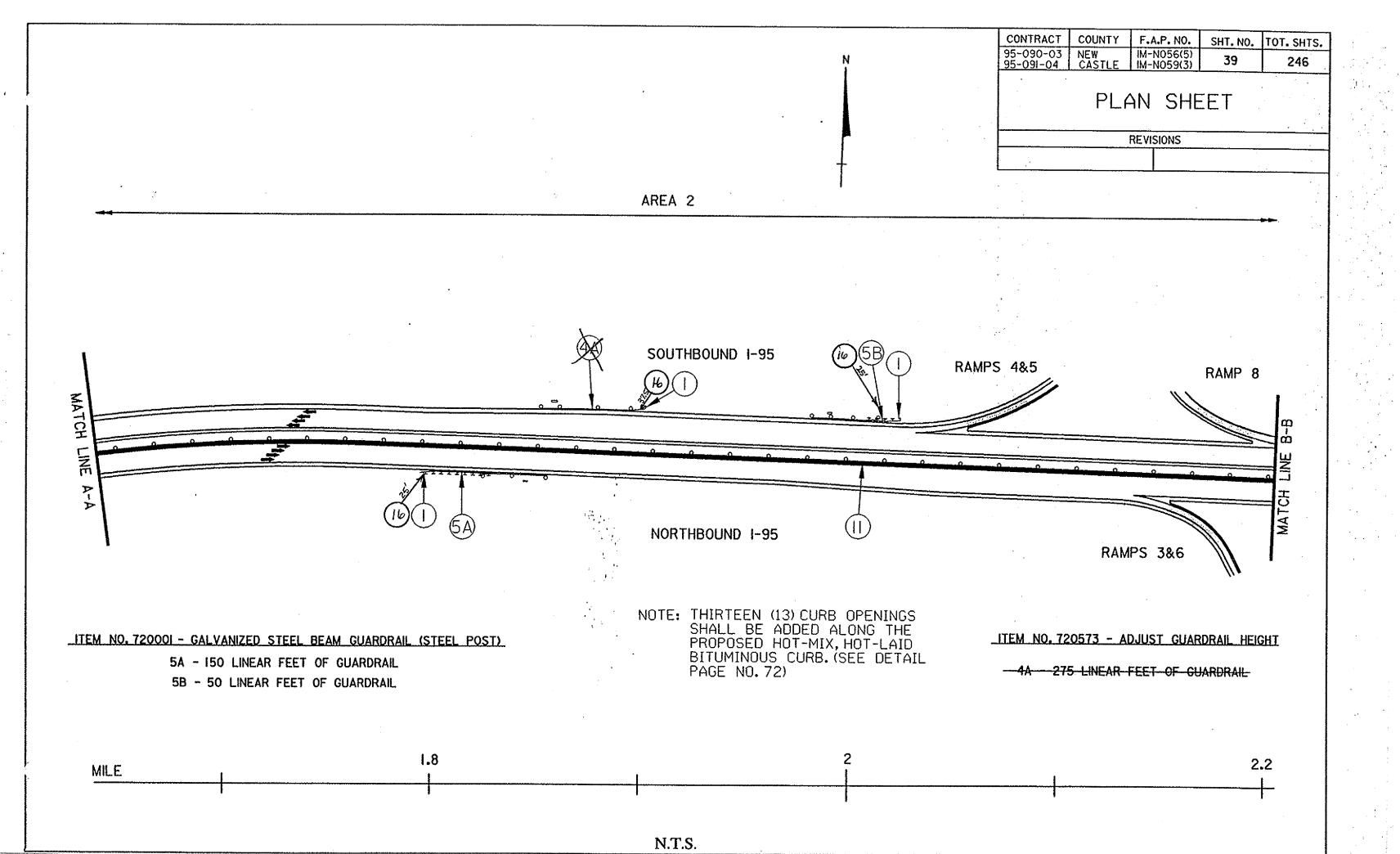
AREA 7 SOUTHBOUND

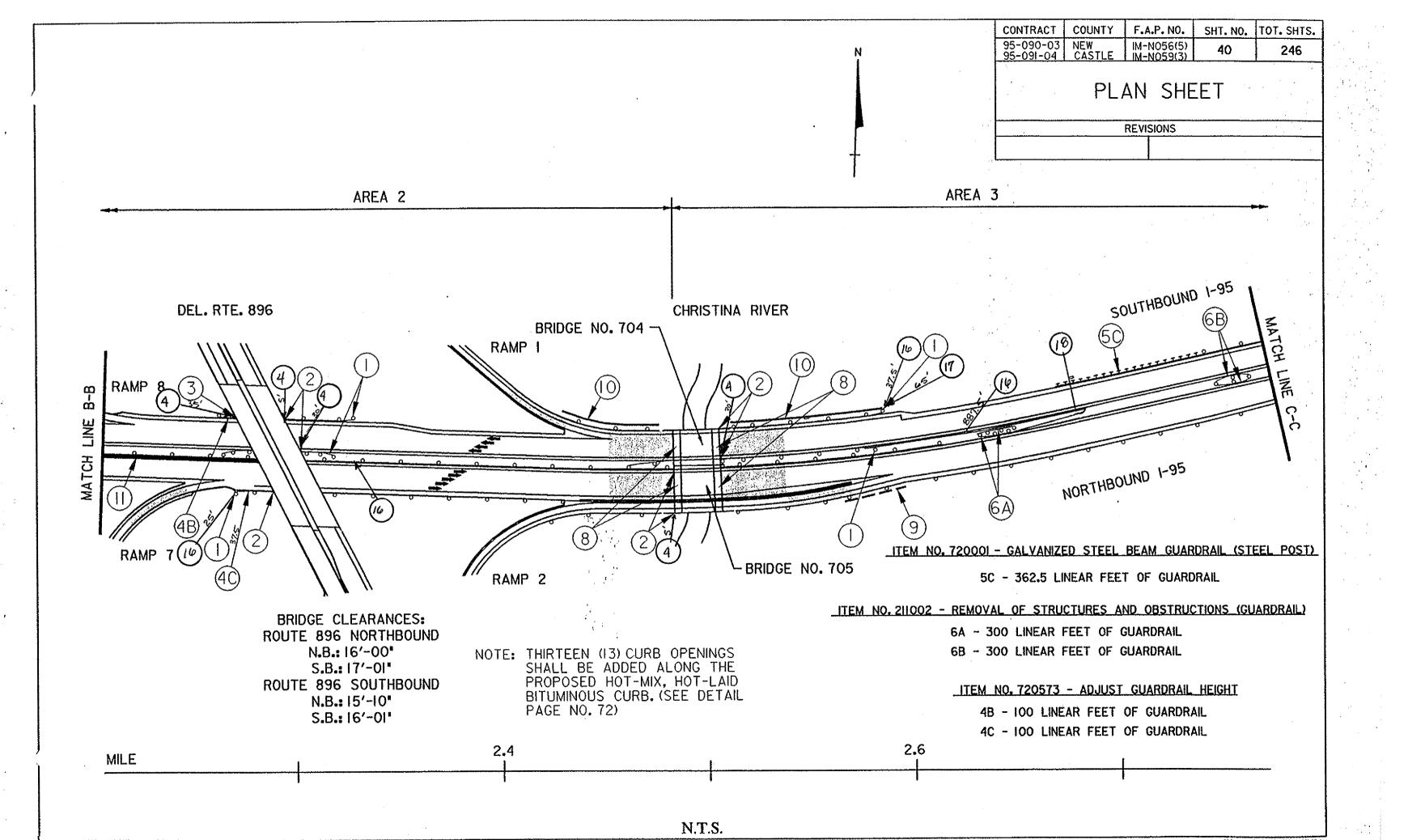
COLLECTOR/DISTRIBUTOR ROAD

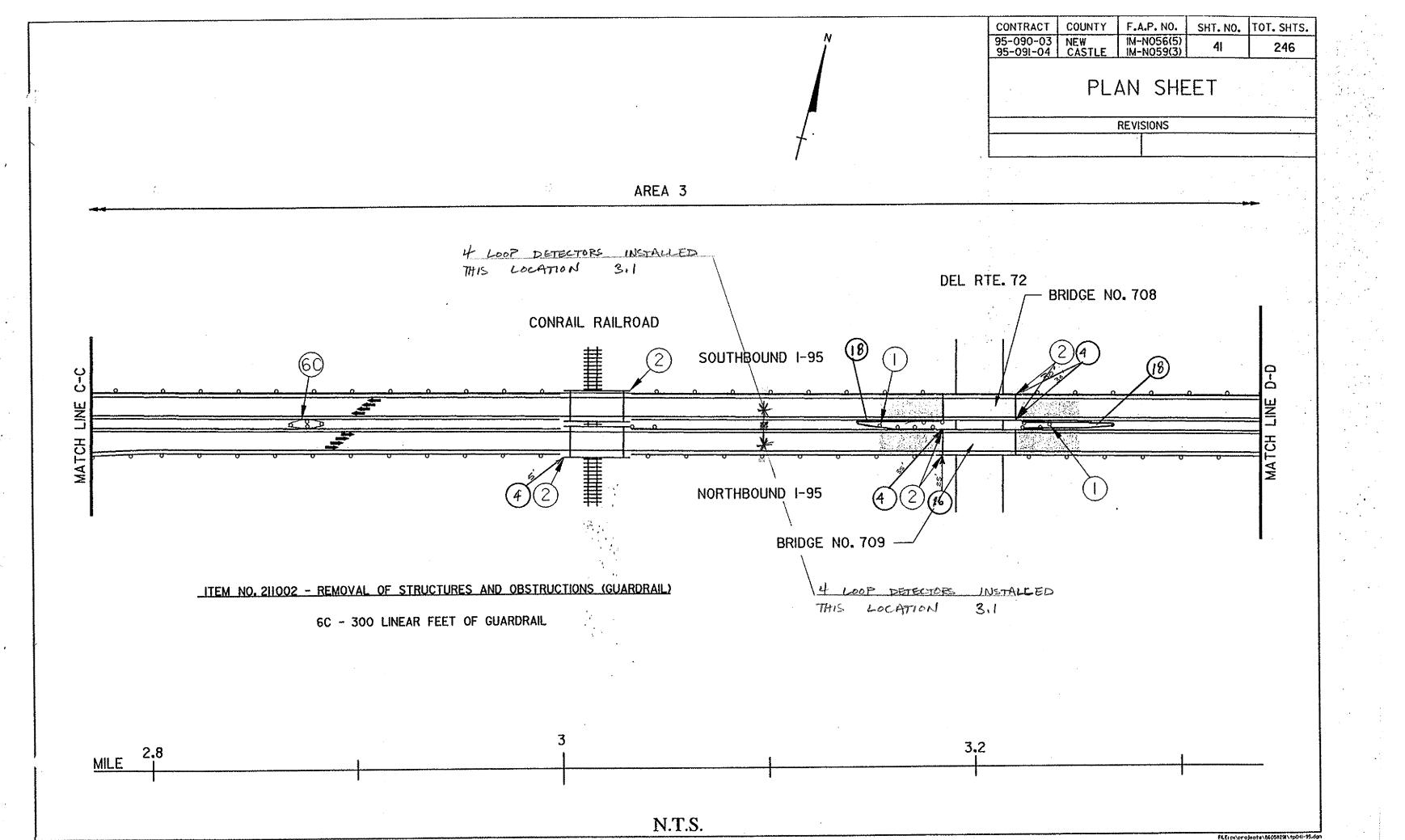
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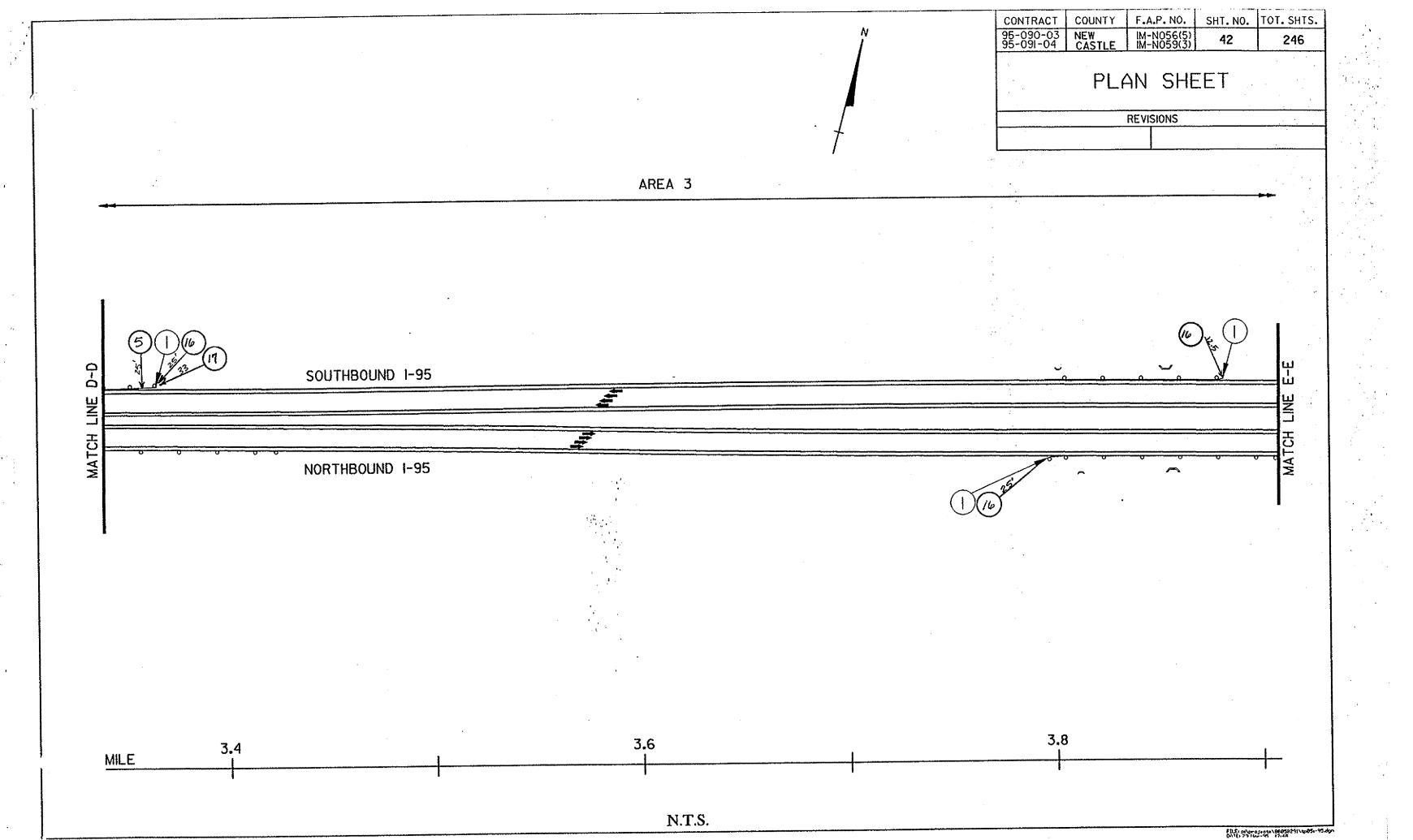
EXISTING 2' MAINTENANCE APRON THAT ARE DISTURBED FROM ADJUSTING GUARDRAIL OR REPLACING CURB SHALL BE REMOVED AND REPLACED WITH I' OF HOT-MIX, HOT LAID BITUMINOUS CONCRETE, TYPE 'C'. (SEE DETAIL PAGE NO. 63).

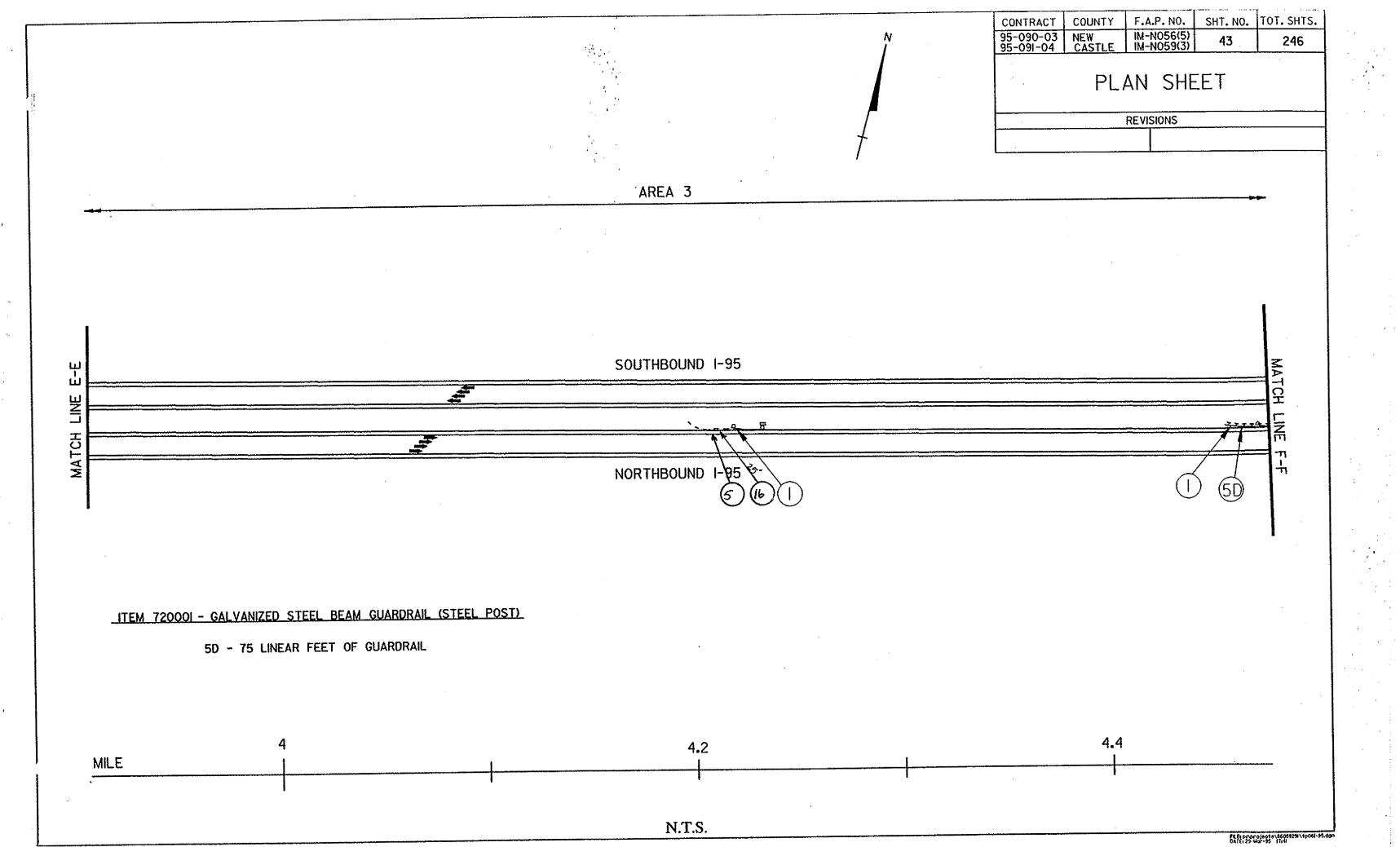


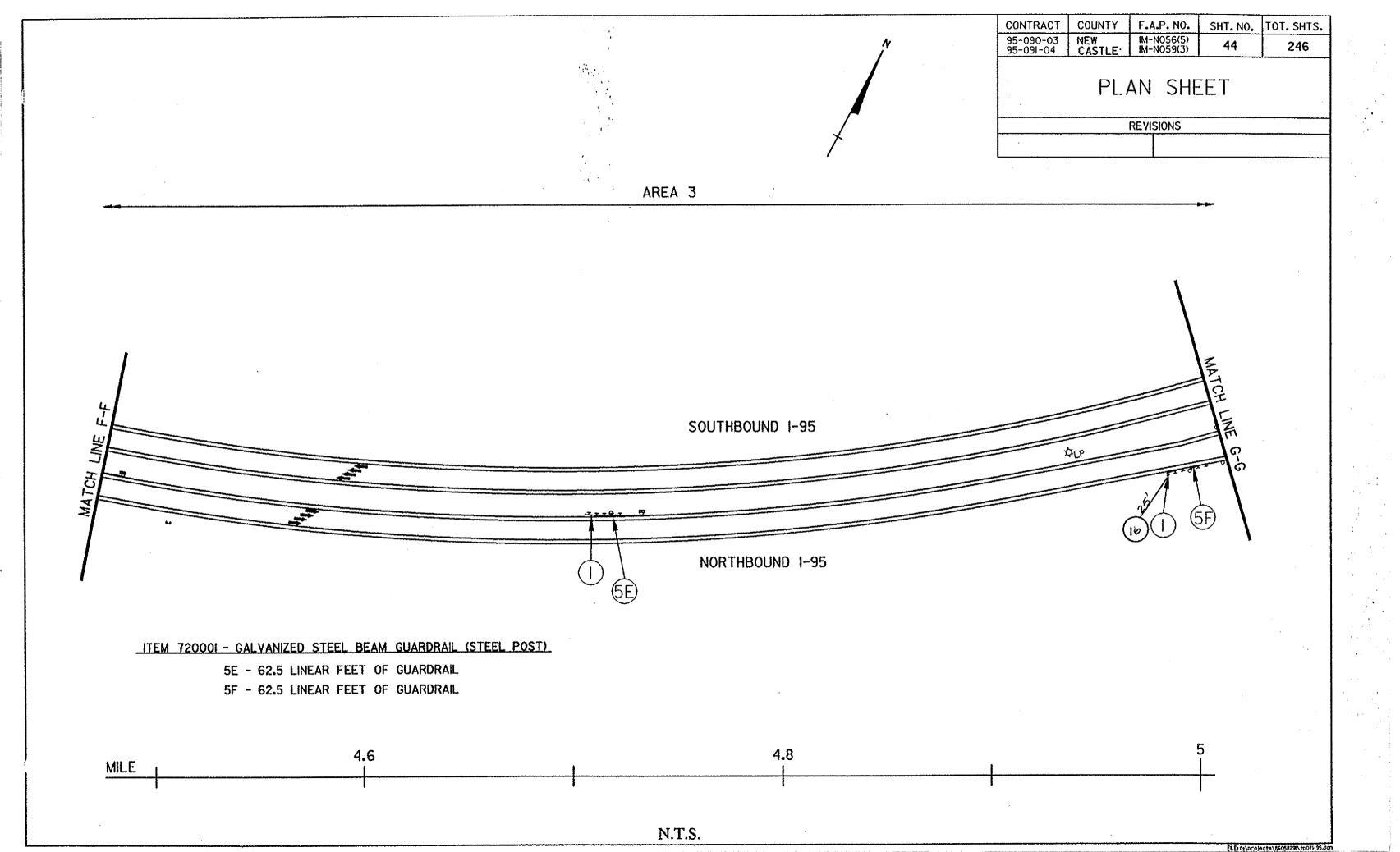


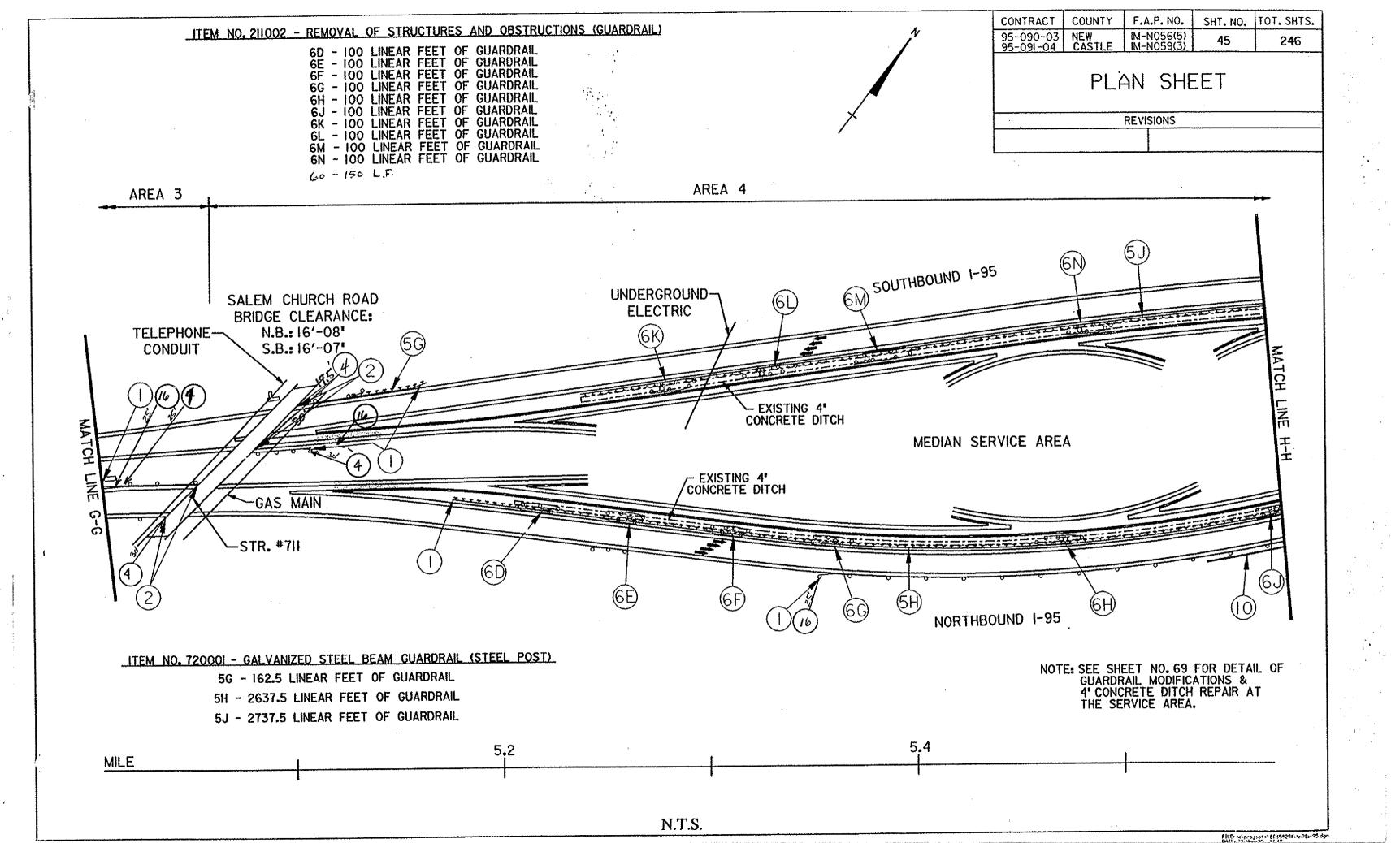


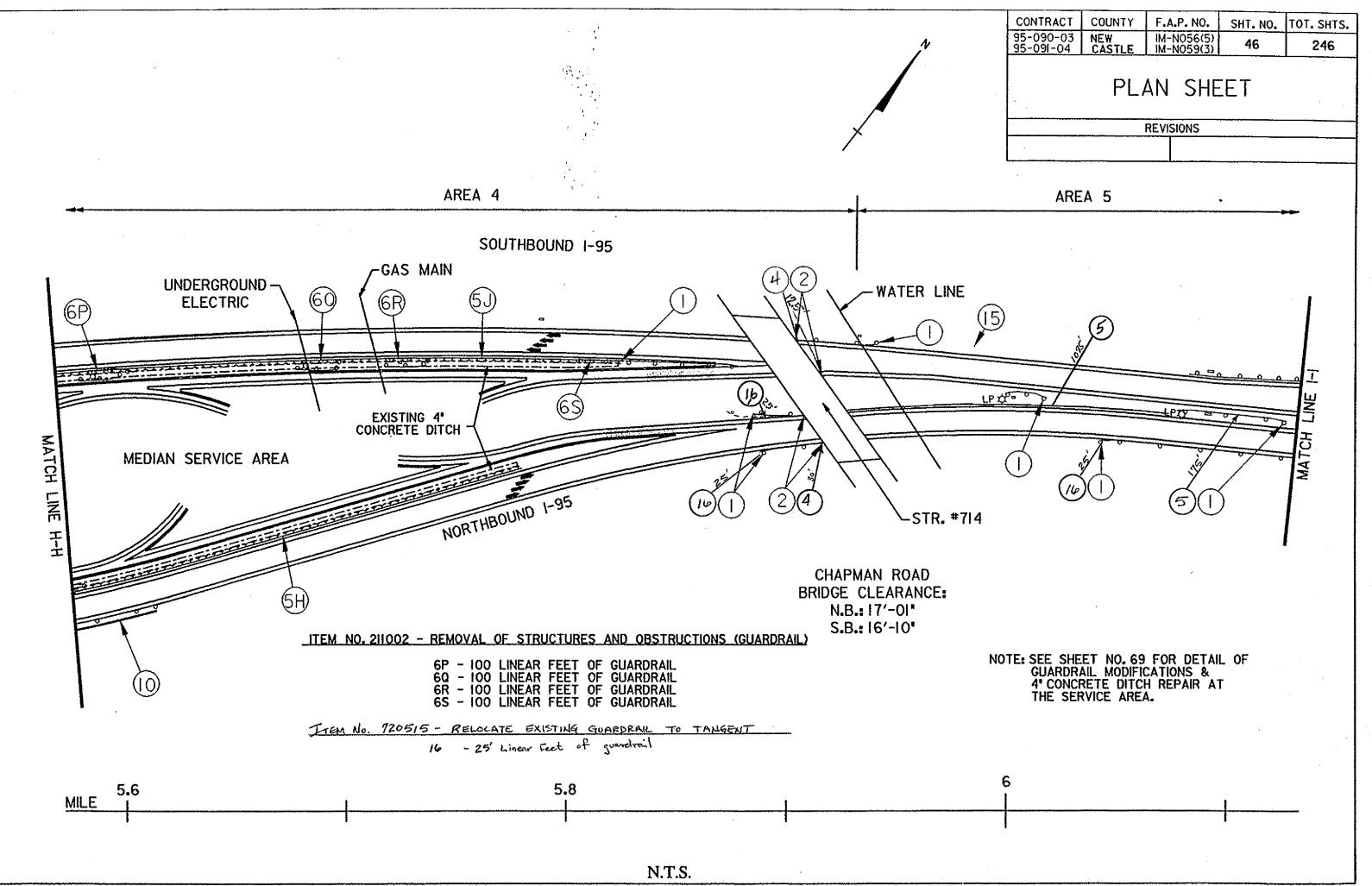


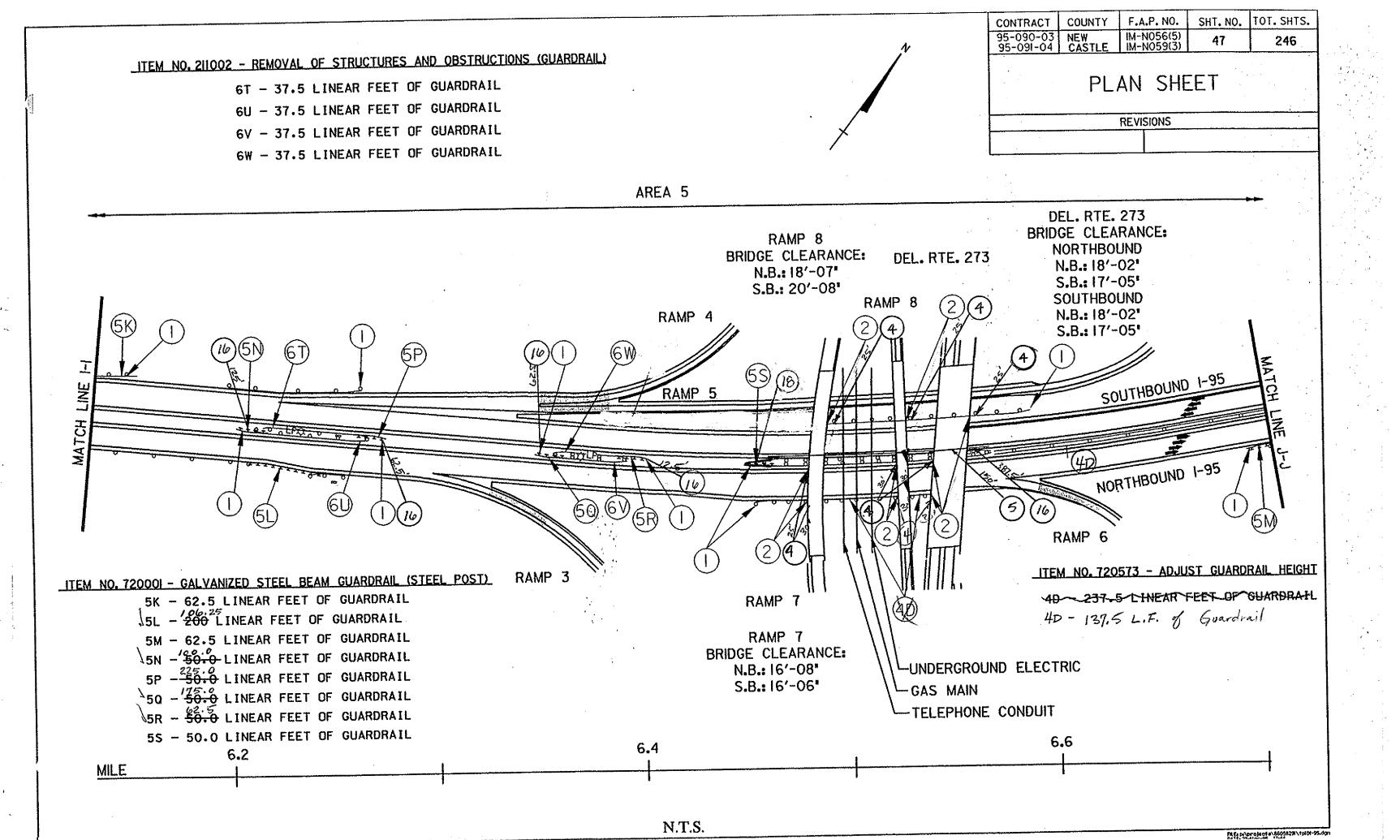


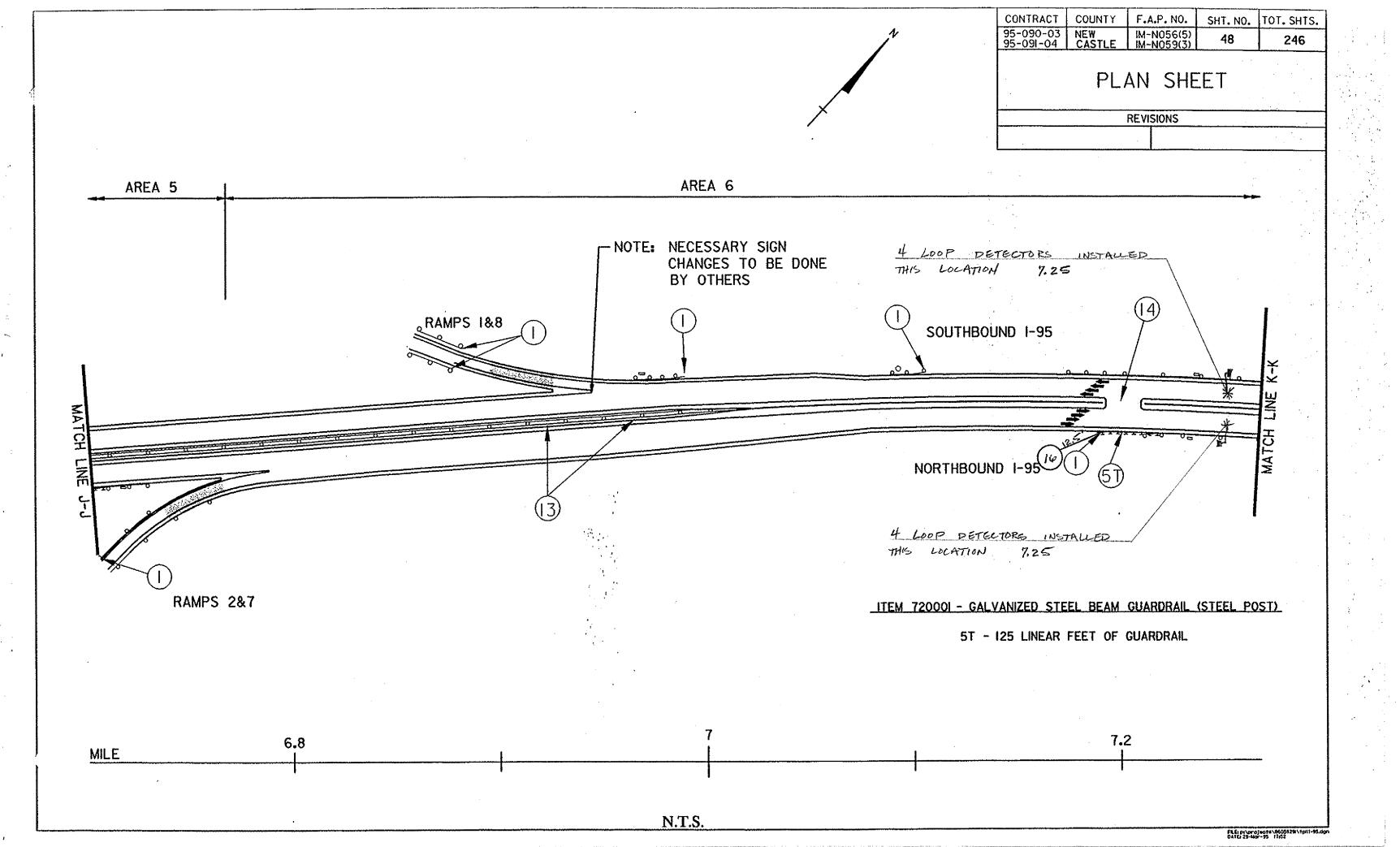


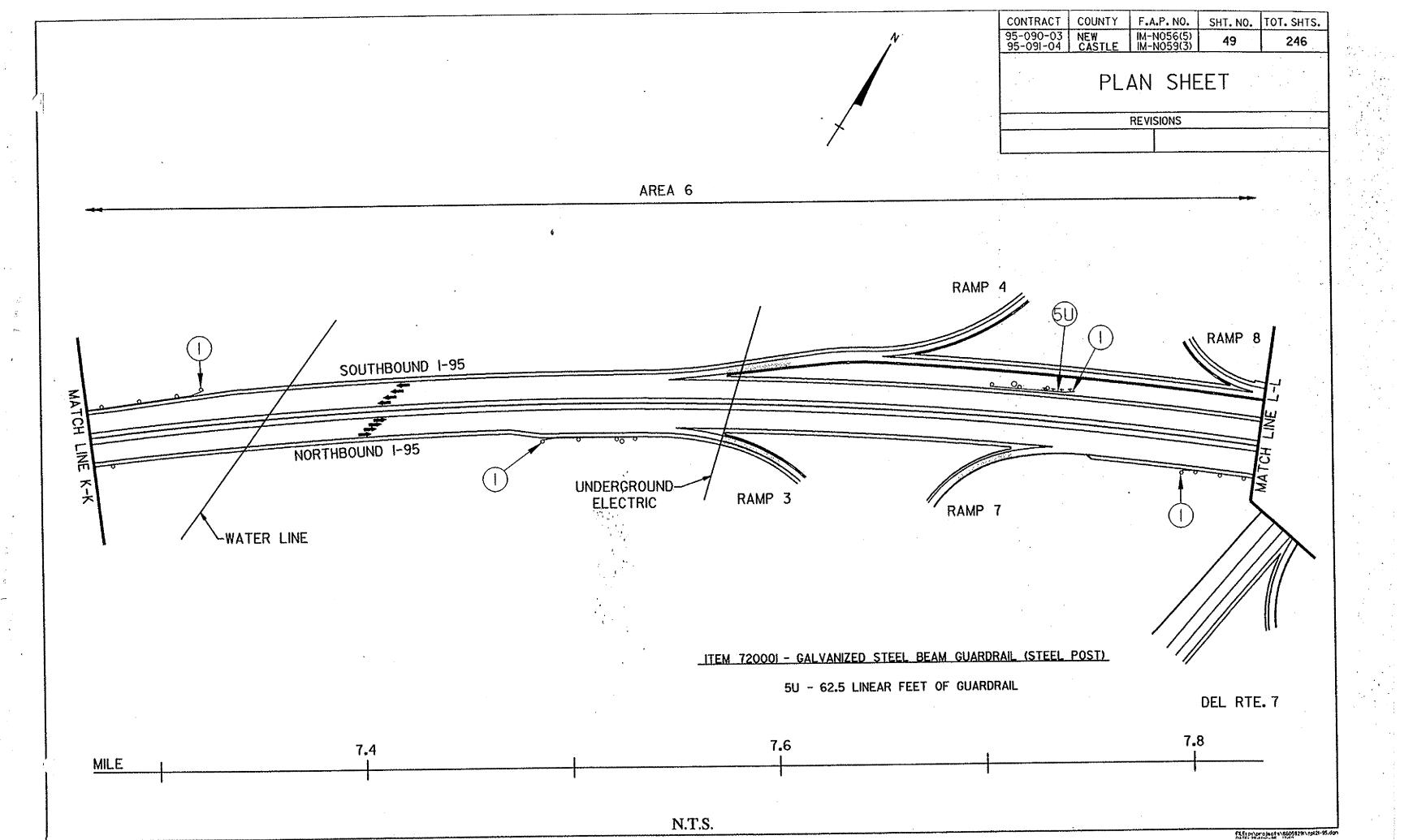


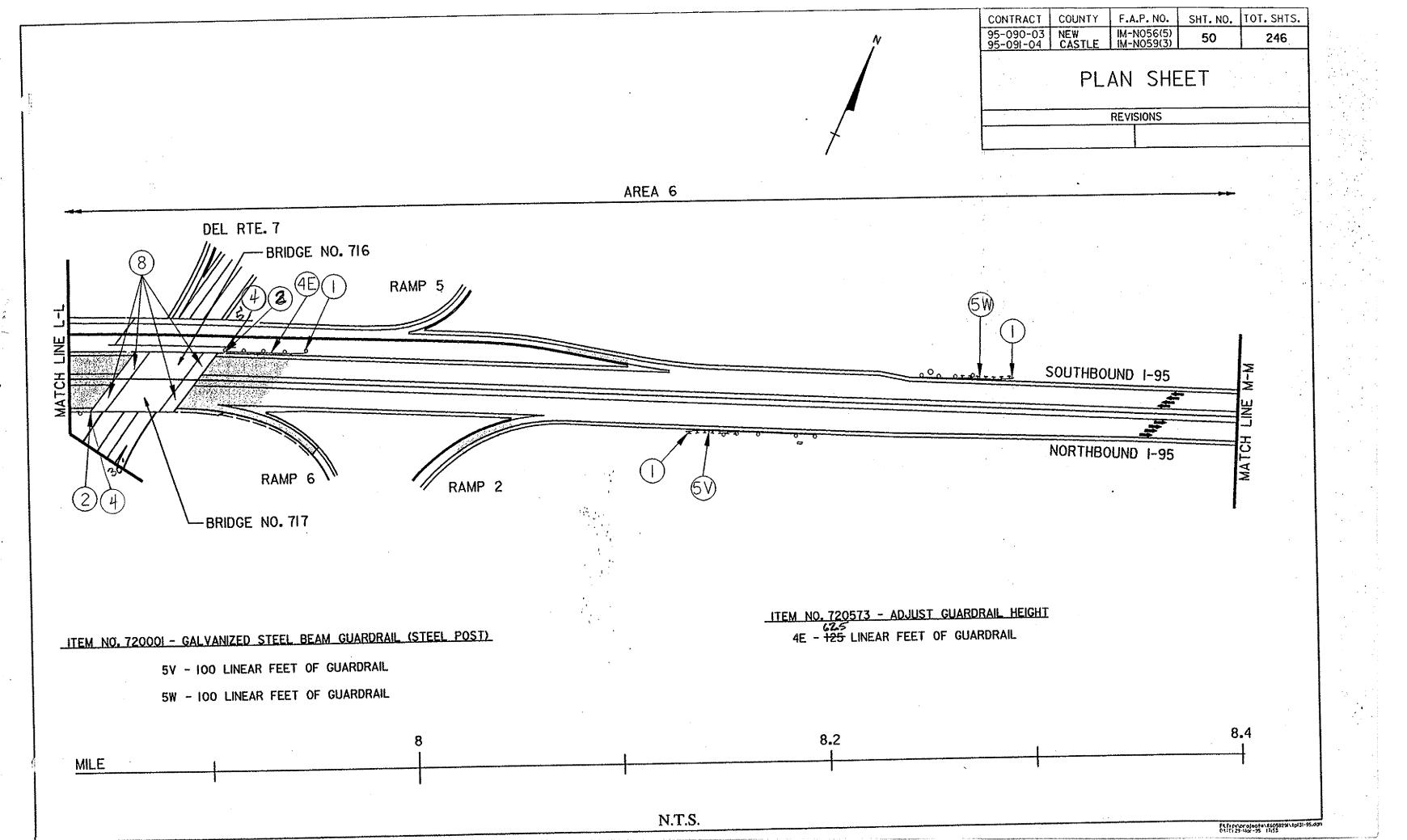


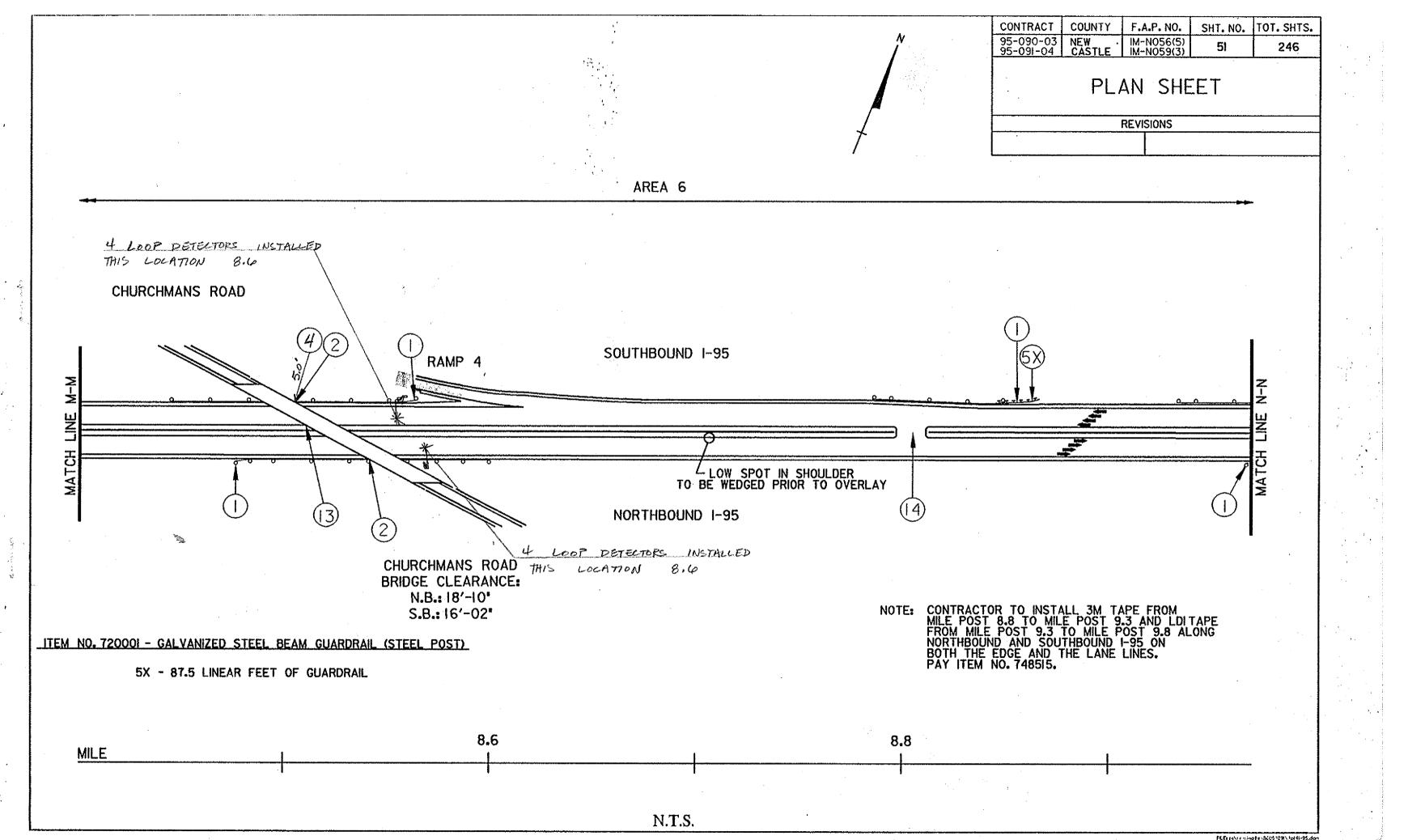


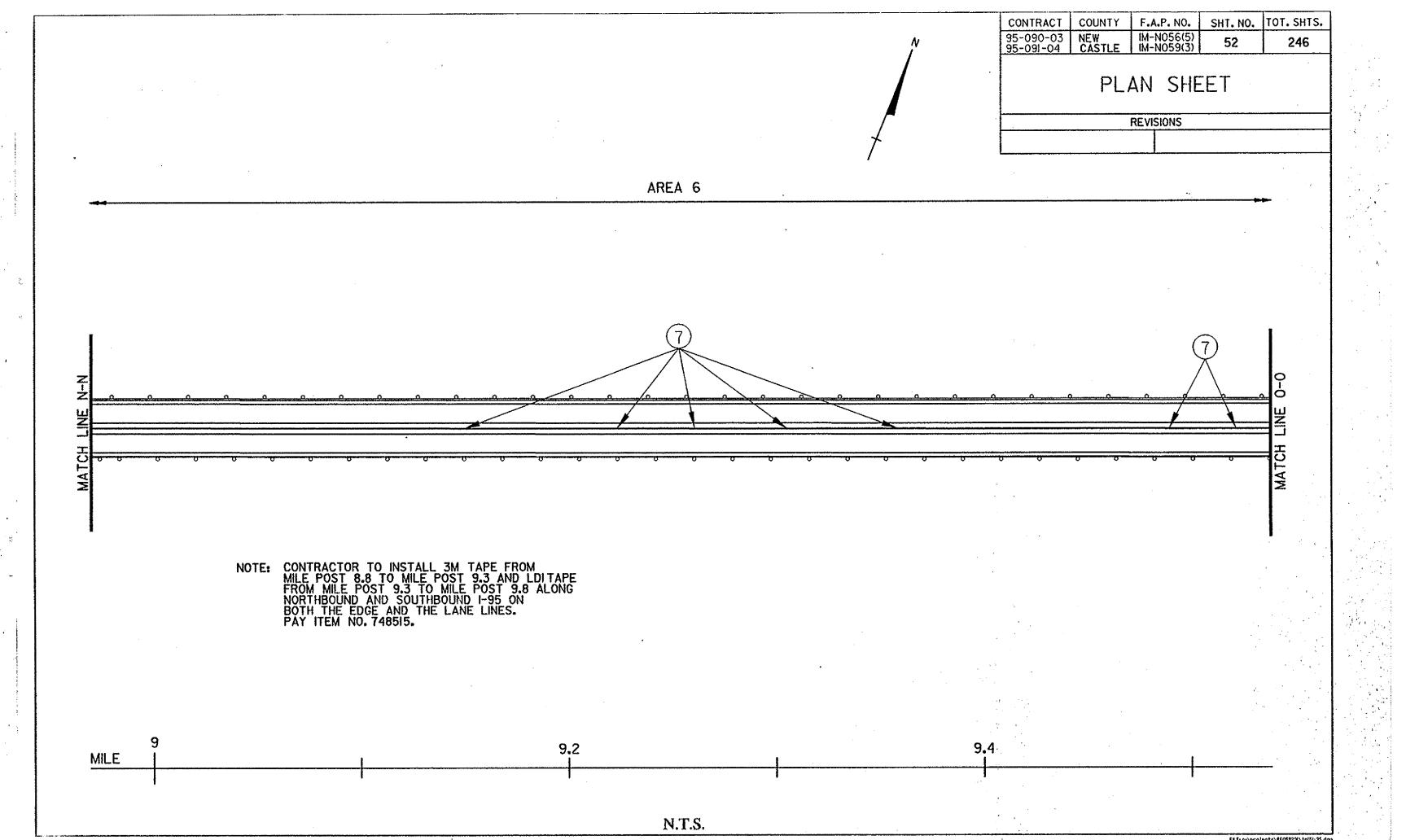


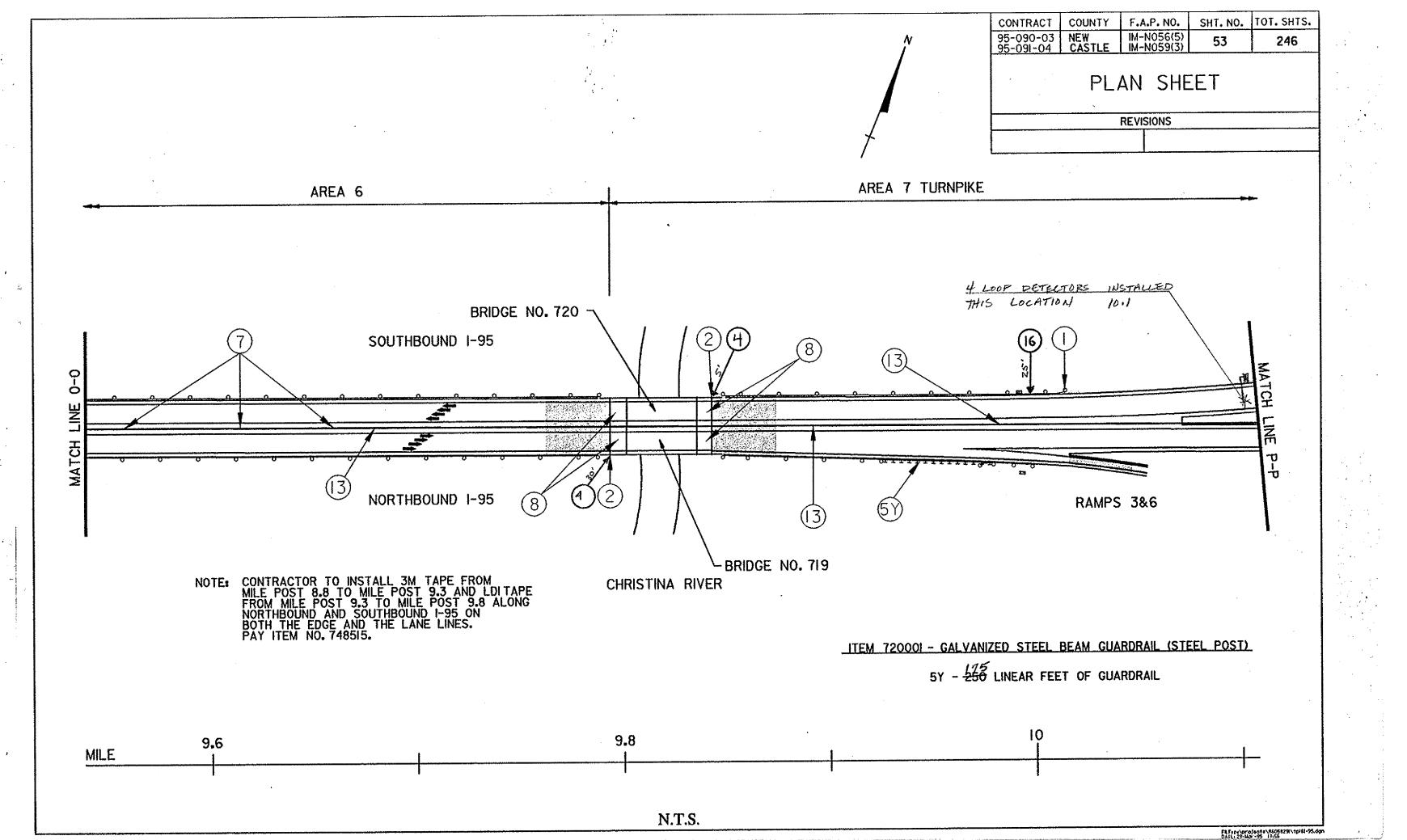


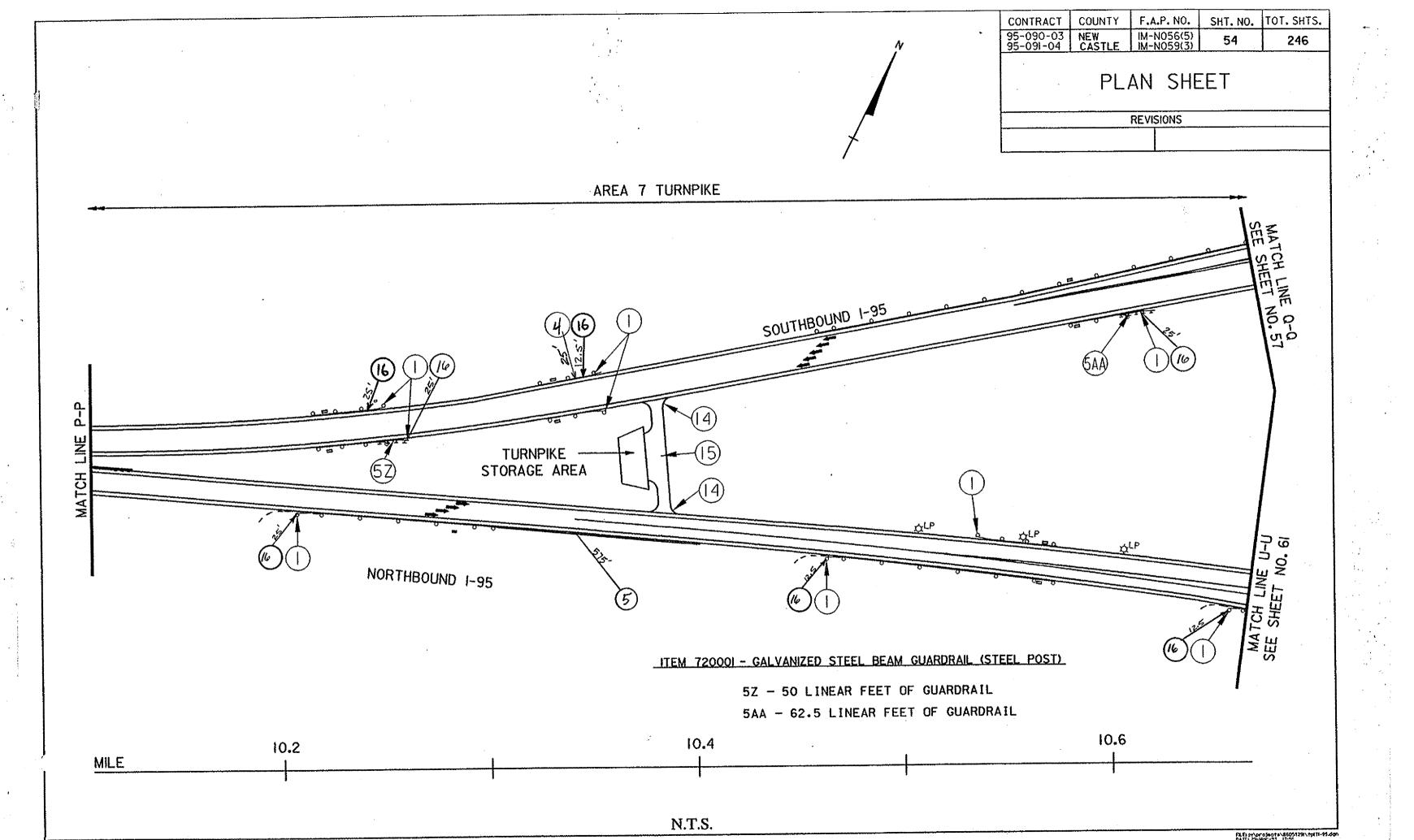








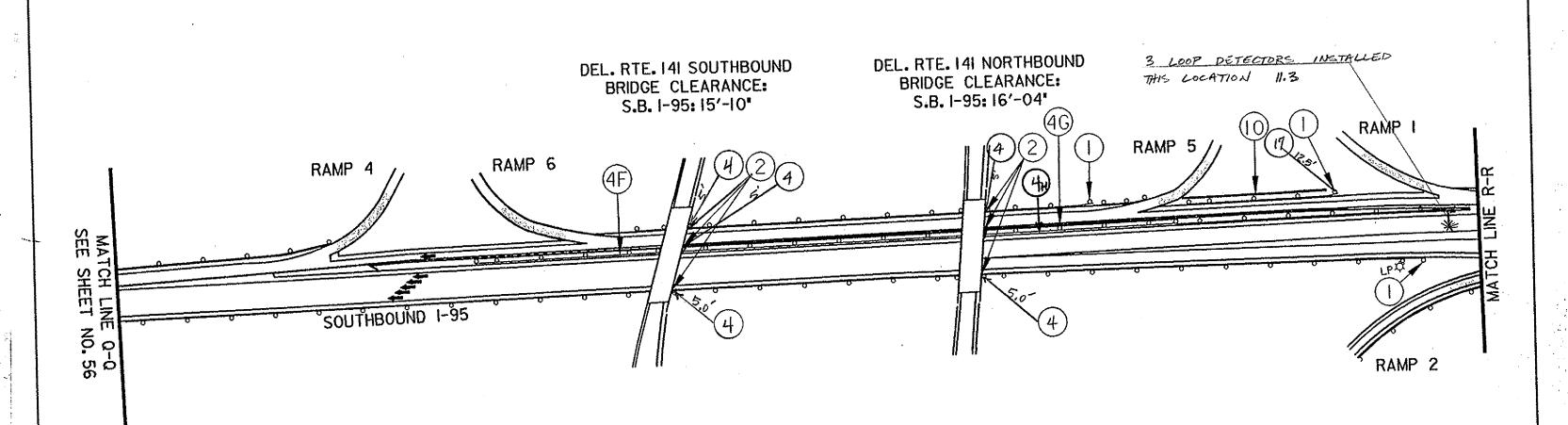




ONTRACT	COUNTY	[F.A.P. NO.]	SH1. NO.	101.51115.
5-090-03	NEW CASTLE	IM-N056(5)	55	246
J-031 Q4_1	ONOTEL			
	DI	ANI CHE	CT	
		AN SHE		
		5-090-03 NEW 5-091-04 CASTLE	5-090-03 NEW IM-N056(5) 5-091-04 CASTLE IM-N059(3)	5-090-03 NEW IM-N056(5) 55

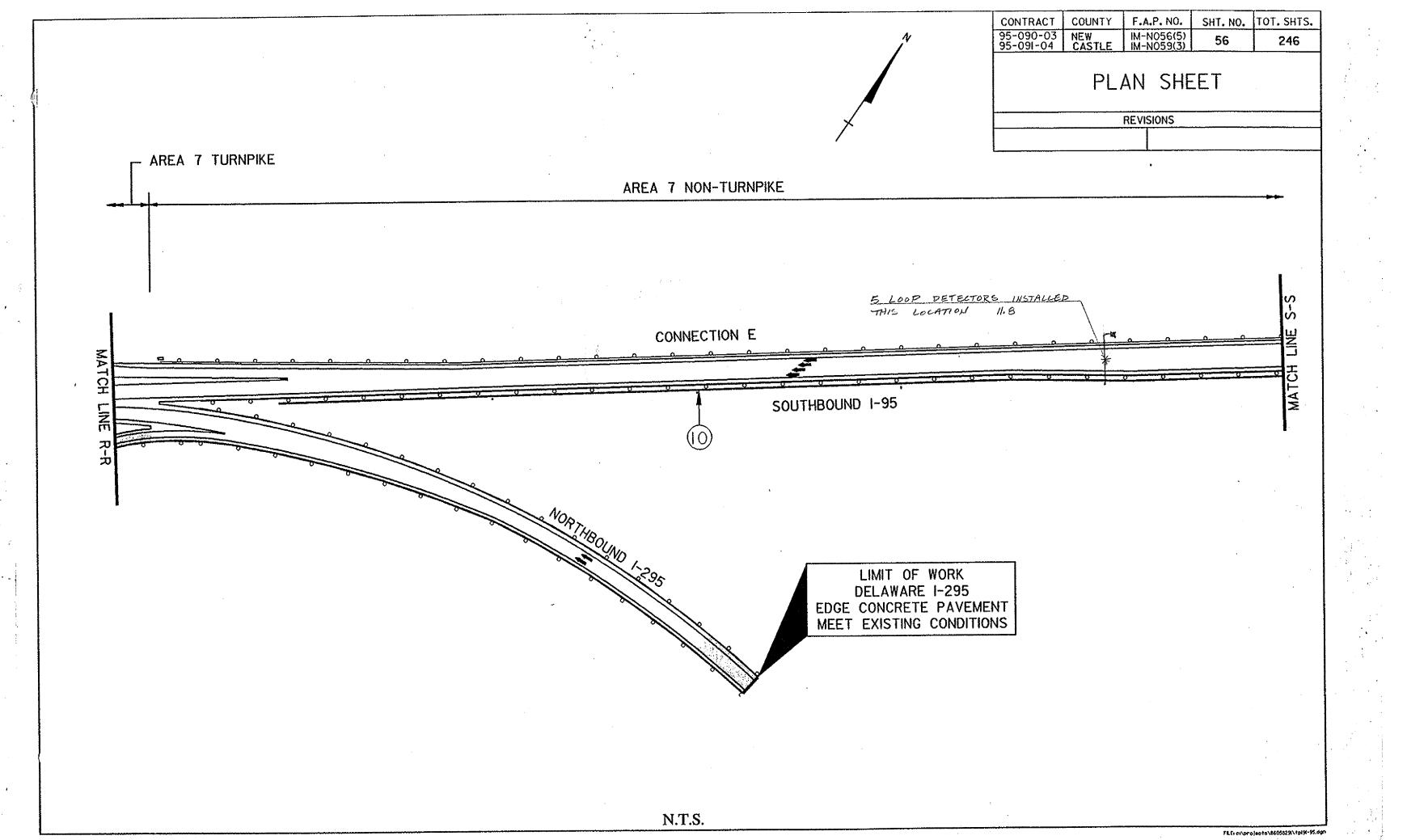
REVISIONS

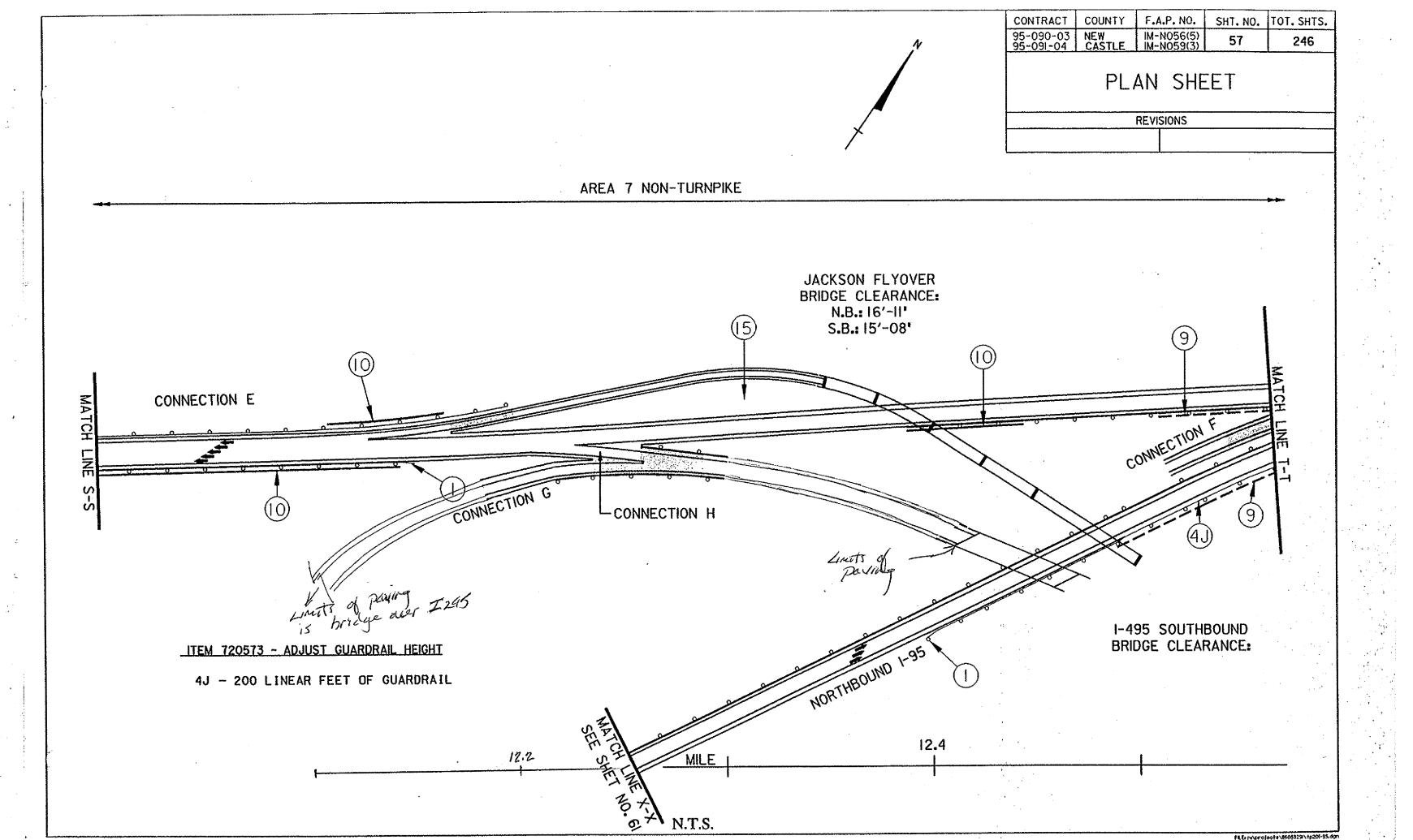
AREA 7 TURNPIKE

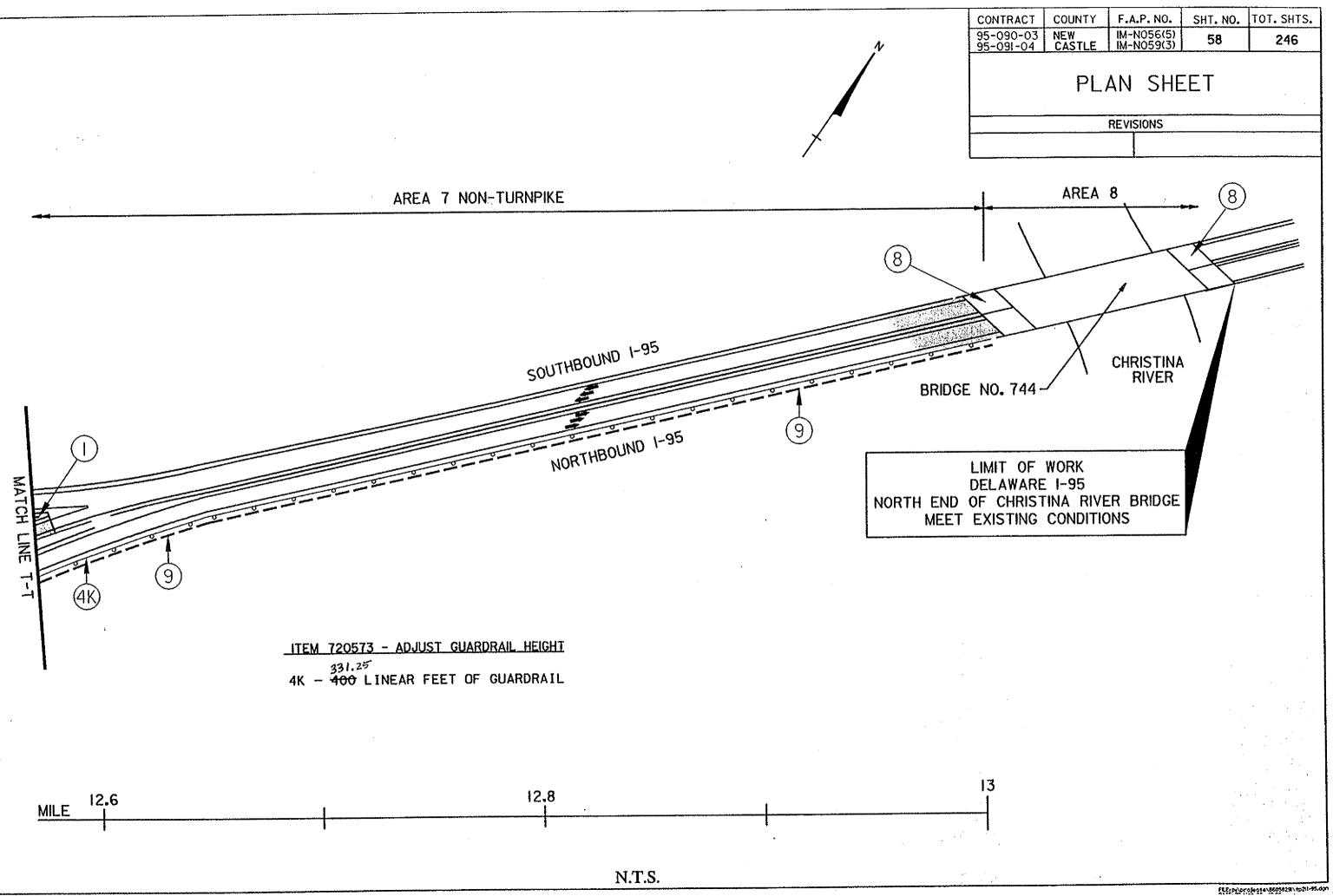


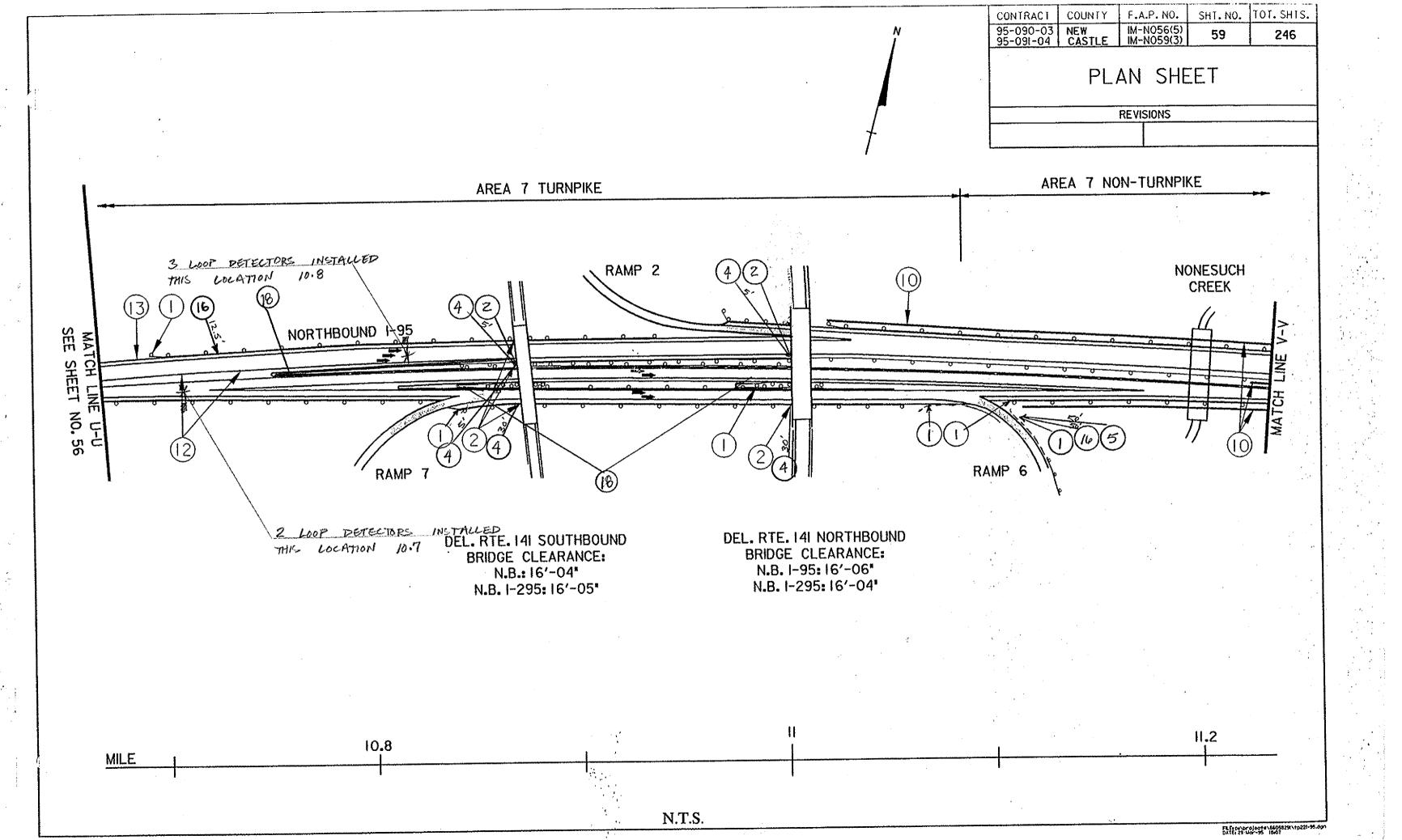
ITEM 720573 - ADJUST GUARDRAIL HEIGHT

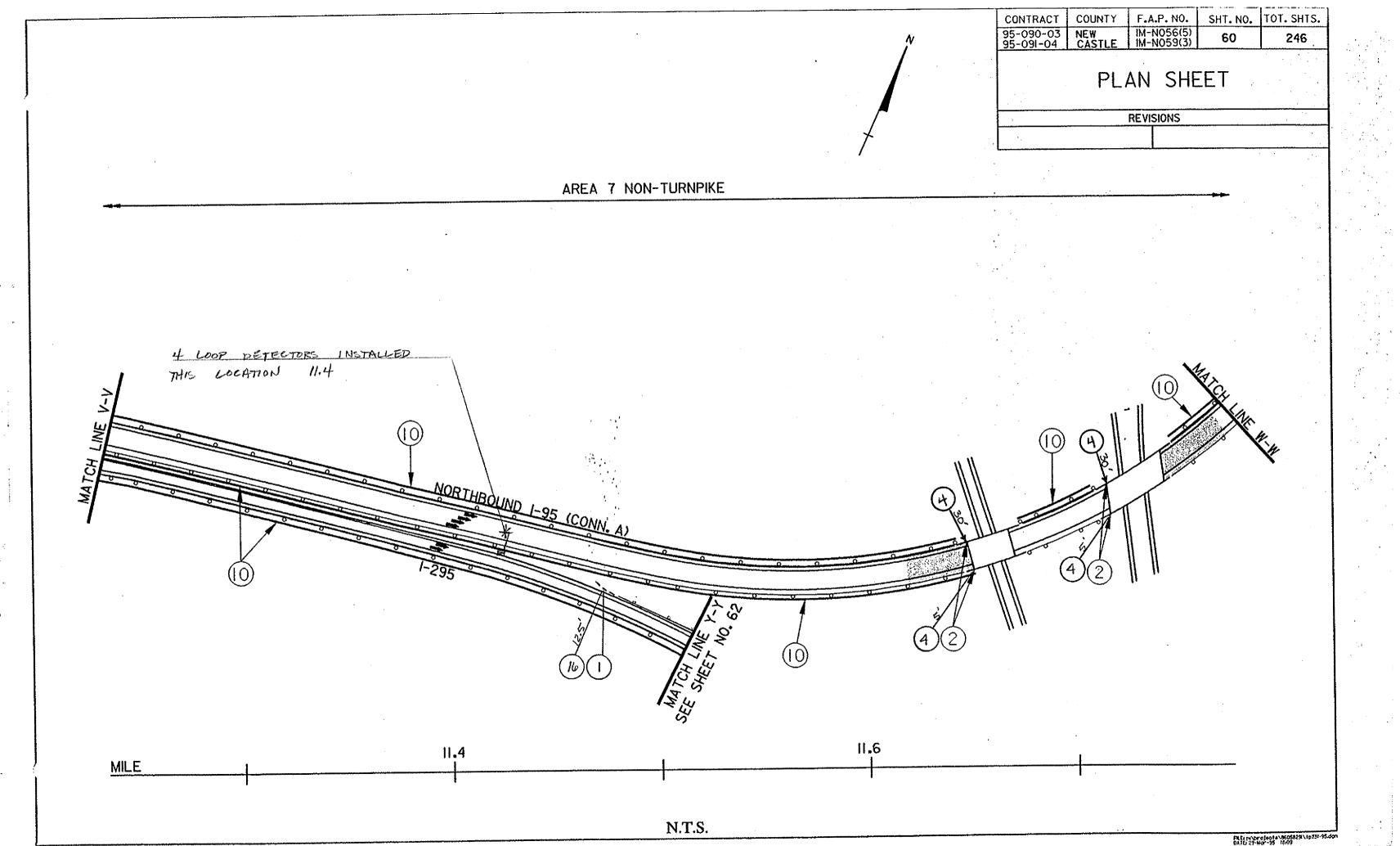
- 4F 400 LINEAR FEET OF GUARDRAIL 7 1250
- 4G 450 LINEAR FEET OF GUARDRAIL S
- 4H 14Z.5 LINEAR FEET OF GUARDRAIL











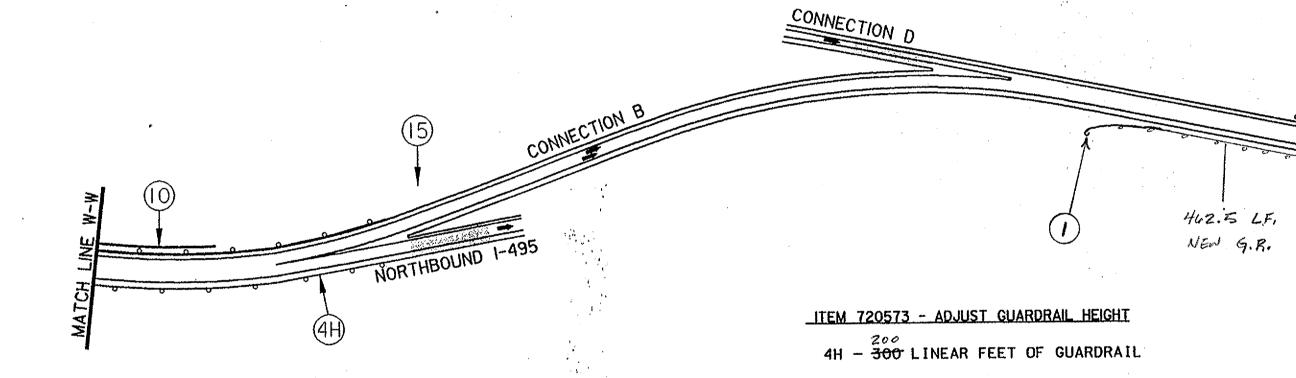
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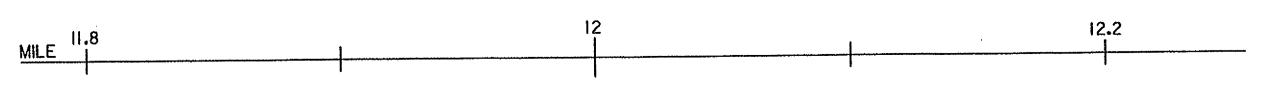
CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHTS.
95-090-03 95-091-04	NEW CASTLE	IM-N056(5) IM-N059(3)	61	246

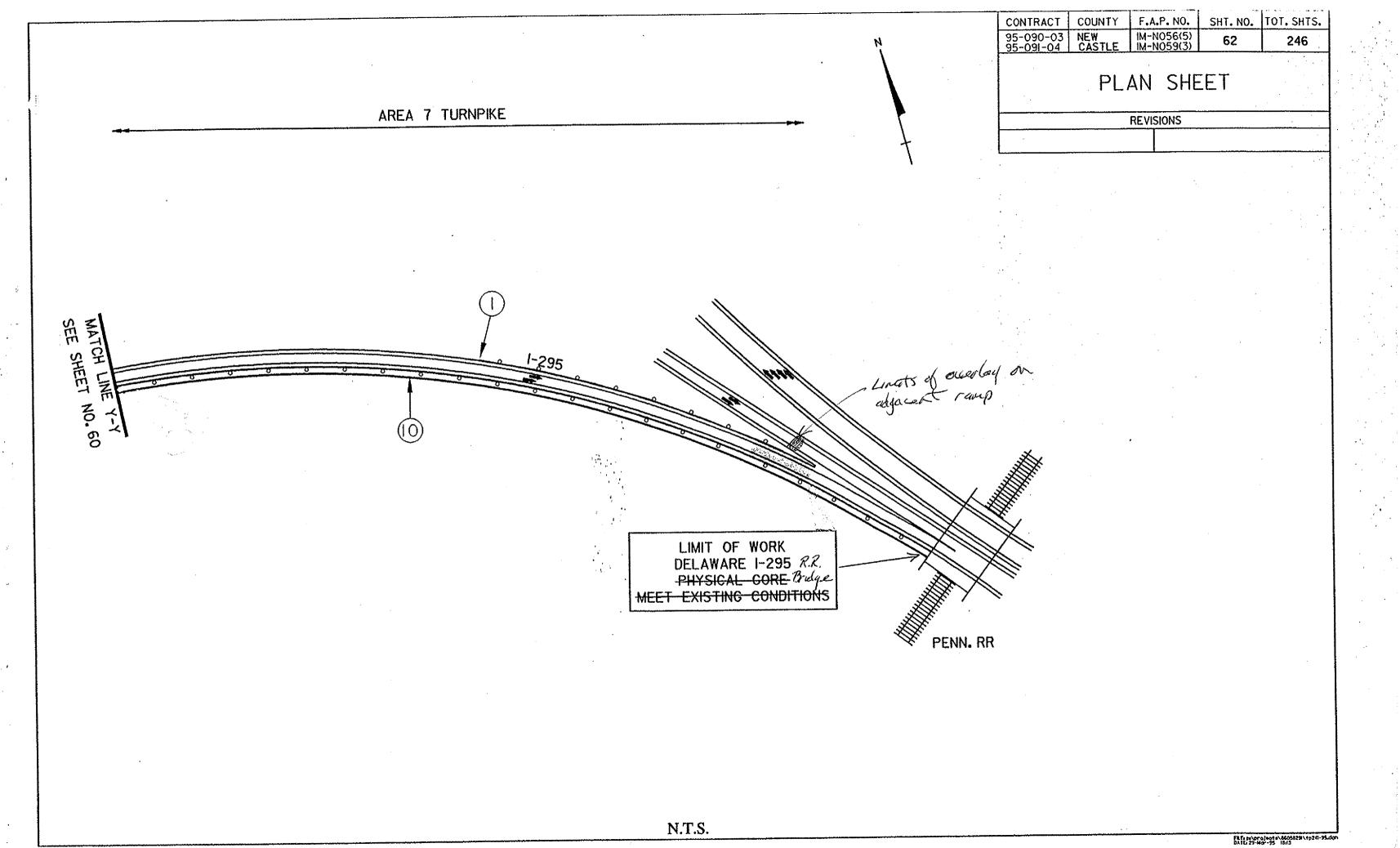
PLAN SHEET

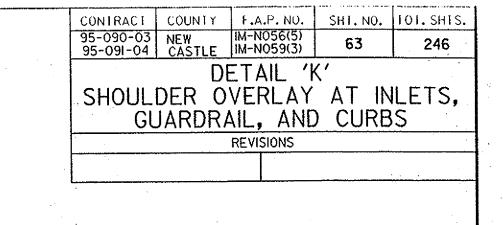
REVISIONS

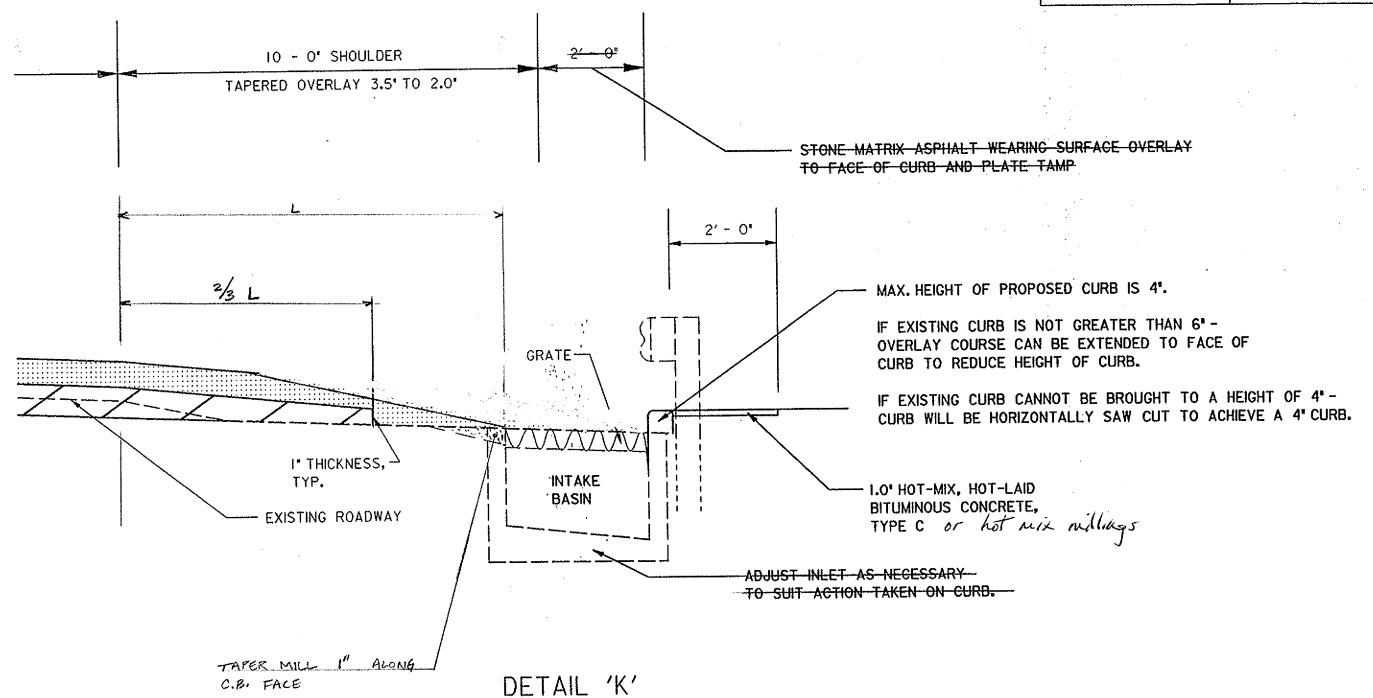
AREA 7 NON-TURNPIKE









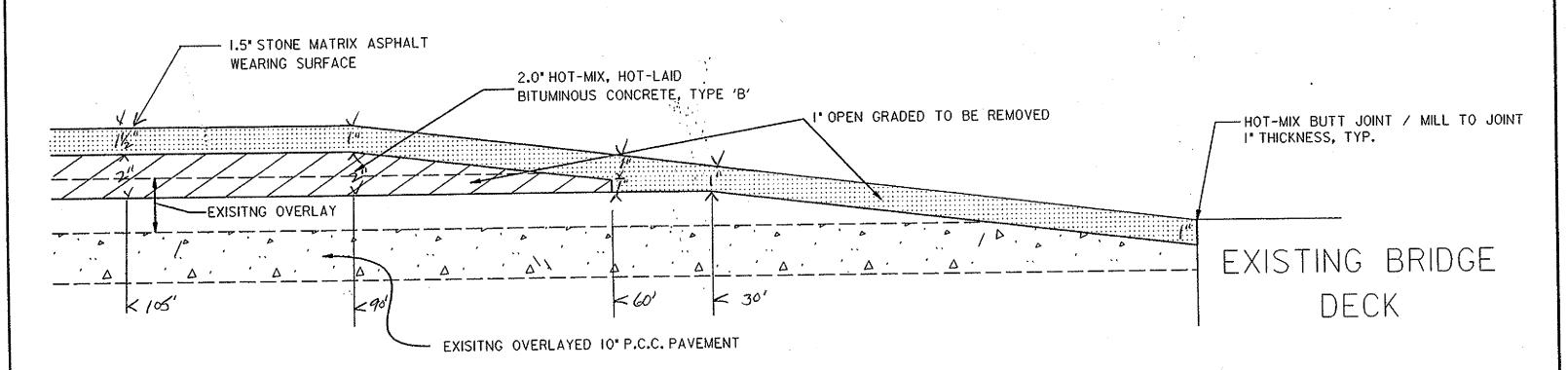


SHOULDER OVERLAY AT INLETS, GUARDRAIL, AND CURBS

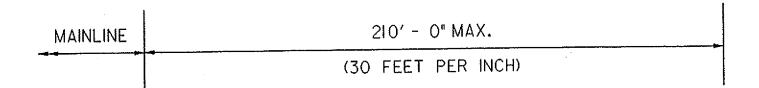
CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHTS.	
95-090-03 95-091-04	NEW CASTLE	IM-N056(5) IM-N059(3)	64	246	
FEATHERING AND BUTT JOINT AT STRUCTURES DETAIL					
REVISIONS					

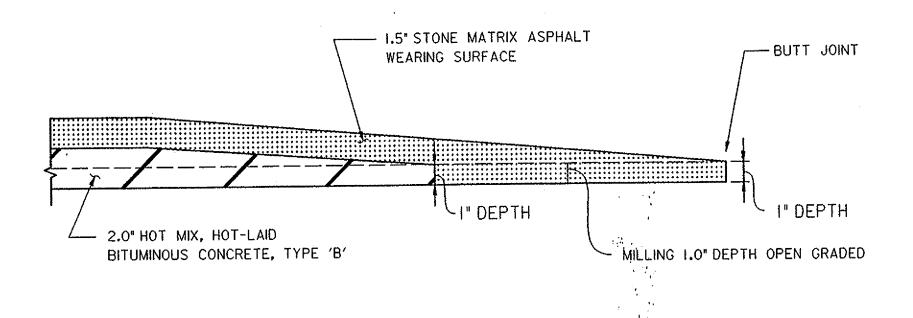
-210' - O" TRANSITION

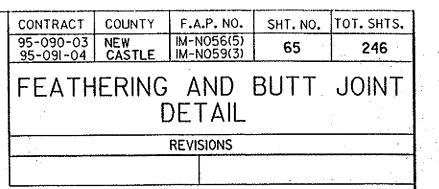
(30 FEET PER INCH)

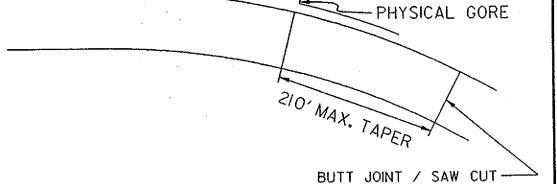


FEATHERING AND BUTT JOINT DETAIL FOR ALL TIES TO EXISTING STRUCTURES



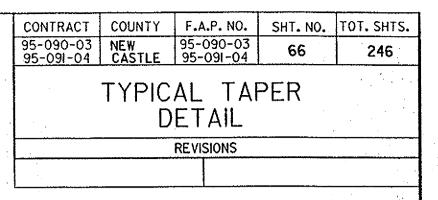




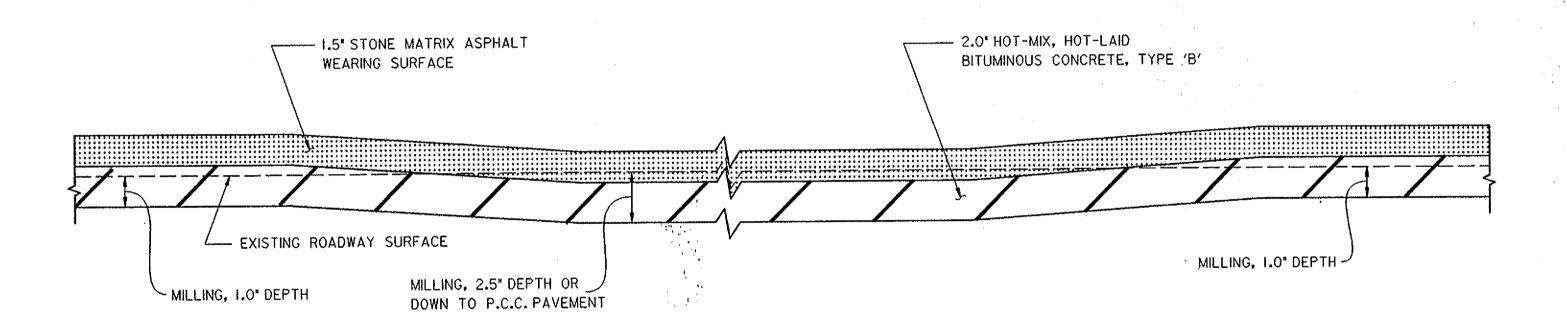


TYPICAL TAPER AT RAMPS

FEATHERING AND BUTT JOINT DETAIL FOR ALL TIES TO EXISTING ROADWAYS AND RAMPS



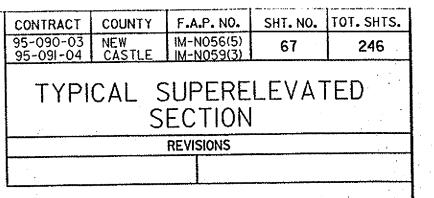
MAINLINE	45' - O" TAPER	BRIDGE AND 15' OFFSET ON EITHER SIDE	(30 FEET PER INCH)	MAINLINE
	(30 FEET PER INCH)	(WIDTH VARIES)		,

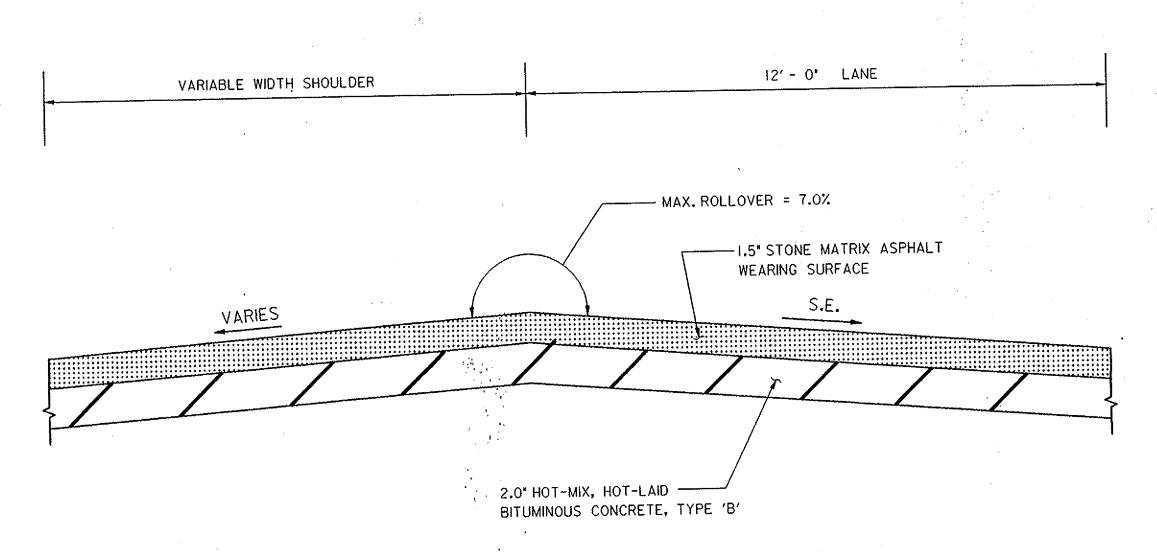


NOTE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A MINIMUM 16'-O" VERTICAL CLEARANCE WHEN EXISTING IS 16'-O' OR GREATER, AND SHALL MAINTAIN EXISTING VERTICAL CLEARANCE WHEN EXISTING IS LESS THAN 16'-O".

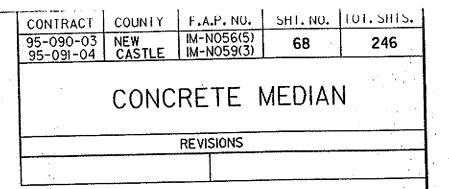
TYPICAL TAPER DETAIL

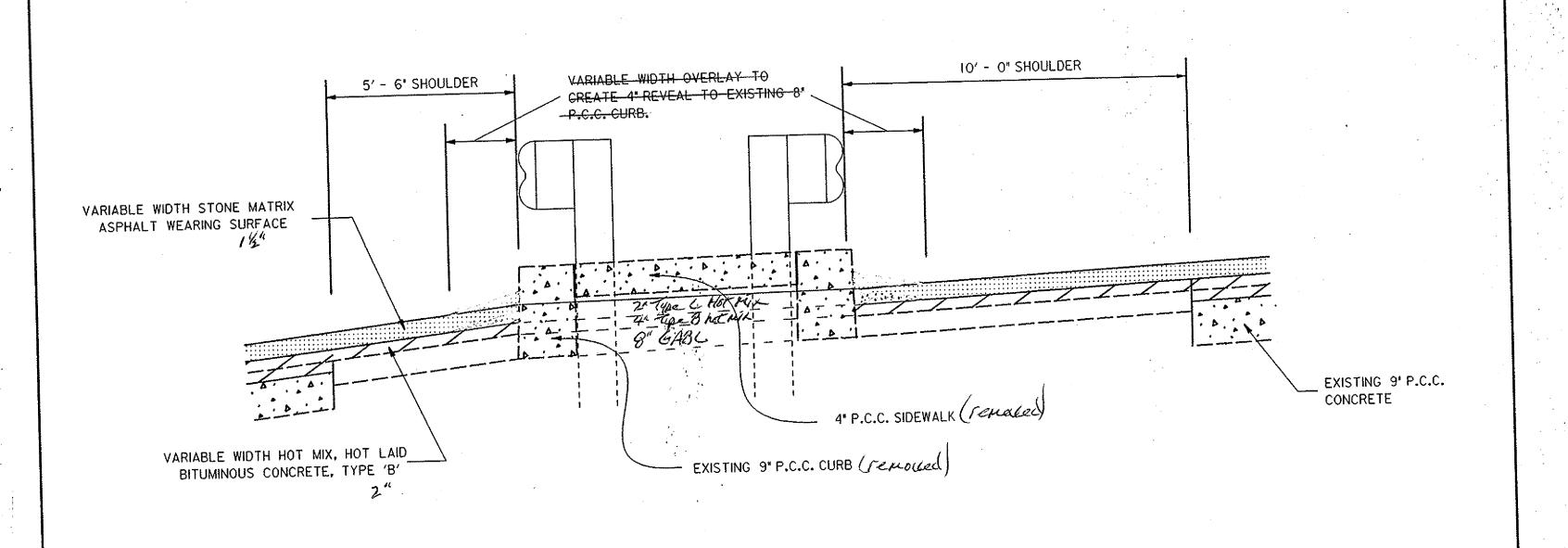
FOR BRIDGE CLEARANCE OF 16' - 00" (MINIMUM)



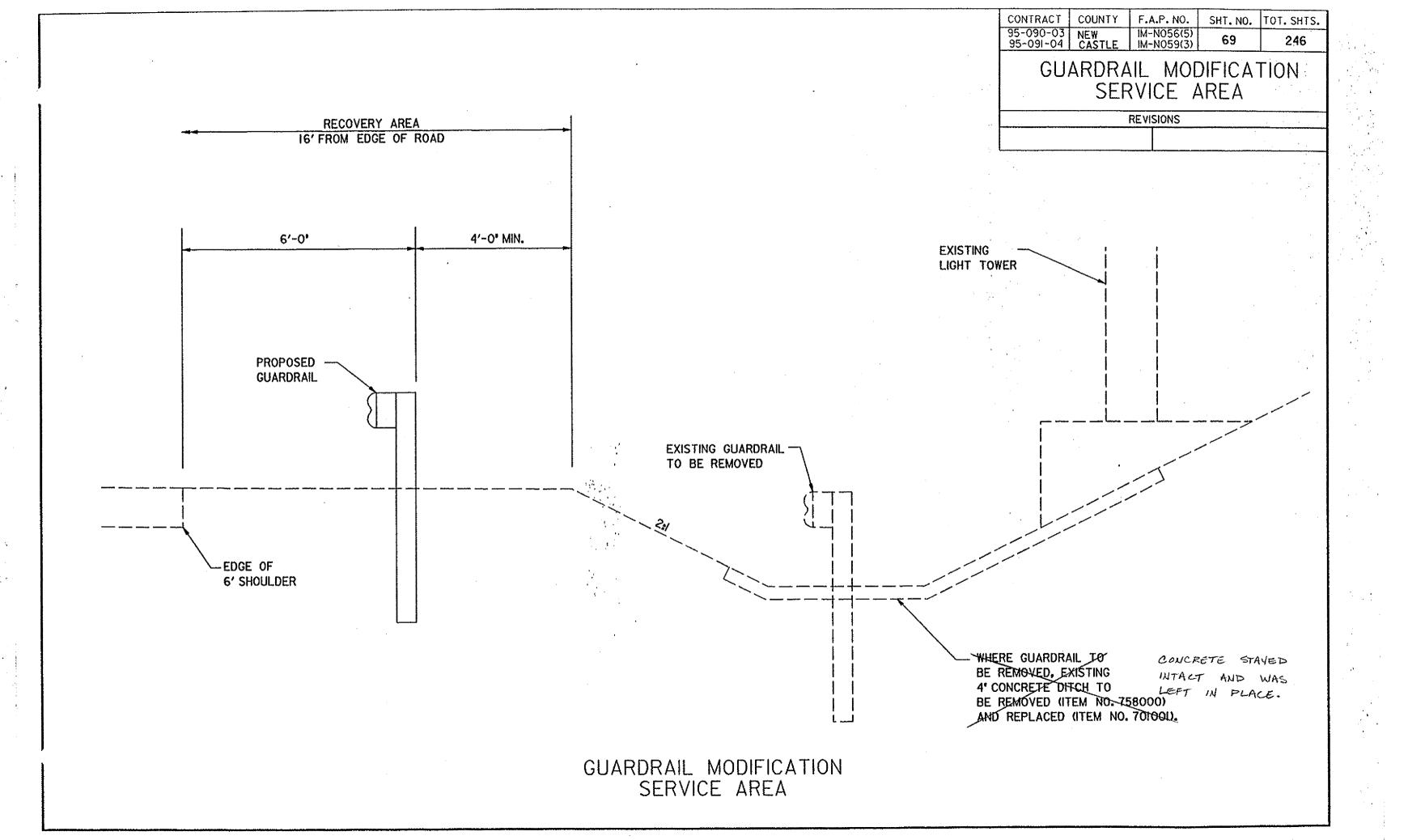


TYPICAL SUPERELEVATED SECTION

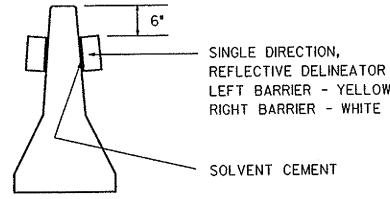




CONCRETE MEDIAN AT I-95 AND I-295 SPLIT NORTHBOUND



NOTE: THE SPACING OF THE PROPOSED REFLECTIVE DELINEATORS SHALL BE 50' ON TANGENT.



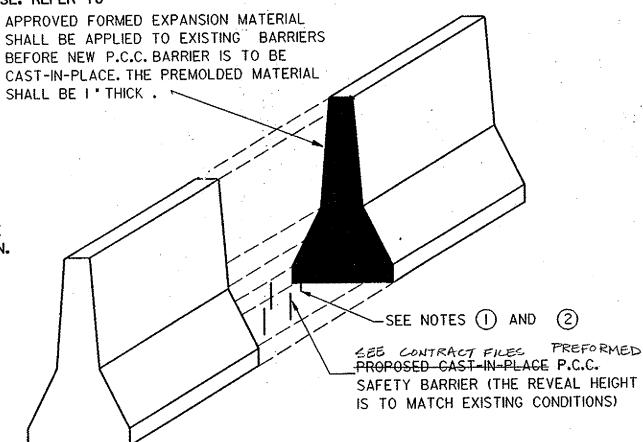
NOTES: IF NOT OVER INLETS:

(1) EXISTING #8 DEFORMED BARS IN P.C.C. FOOTING TO BE USED IF IN GOOD CONDITION OR REPLACED IF REQUIRED. IF EXISTING BARS ARE USED, THEY SHOULD BE CLEANED AND COATED. IF NO BARS EXIST, #8 DEFORMED BARS 12" LONG SHALL BE SET 6" IN THE P.C.C. FOOTING AND SPACED ON 4' STAGGERED CENTERS WITH EACH ROW 12" APART.

IF OVER INLETS:

ORIGINAL CONSTRUCTION PLANS HAD AN OPTIONAL DOWELED CONSTRUCTION JOINT. IF BUILT THAT WAY, BARRIER TO BE REMOVED TO JOINT AT BASE. REFER TO (I) ABOVE CONCERNING ANCHOR BARS.

NOTE: AFTER BARRIERS ARE CAST, THEY SHALL BE WATERPROOFED AS PER ITEM 602546. (P.C.C. BARRIER ONLY). THE CONTRACTOR IS RESPONSIBLE FOR WATERPROOFING THE ENTIRE EXPOSED SURFACE OF THE NEW BARRIER SECTION.



CONTRACT

95-090-03 NEW 95-091-04 CASTLE

SHT. NO. TOT. SHTS.

F.A.P. NO.

IM-N056(5) IM-N059(3)

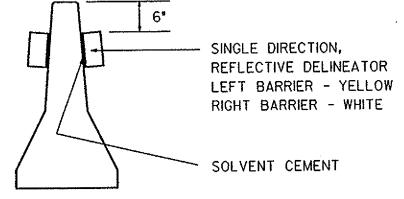
PERMANENT

P.C.C. SAFETY BARRIER

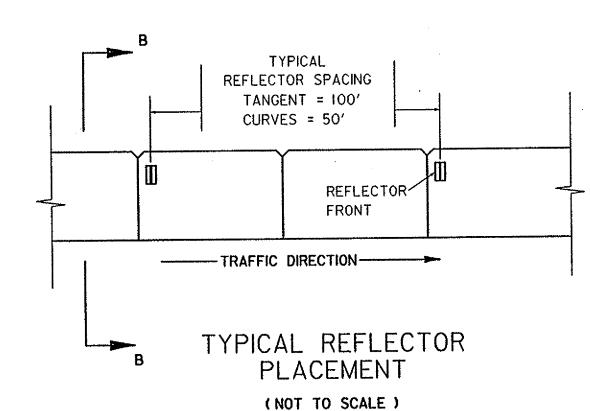
REVISIONS

COUNTY

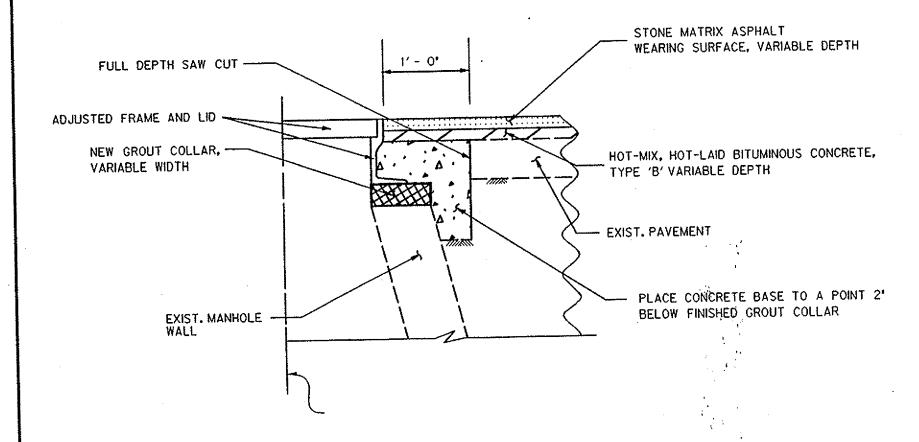
EXPANSION JOINT FOR PERMANENT P.C.C. SAFETY BARRIERS



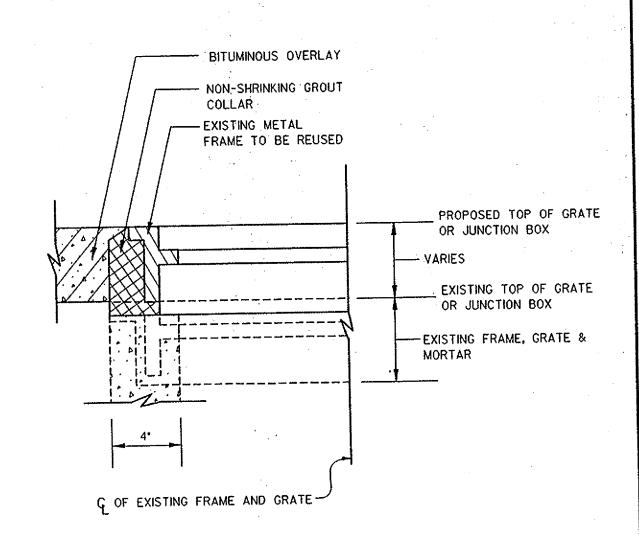
SECTION B - B



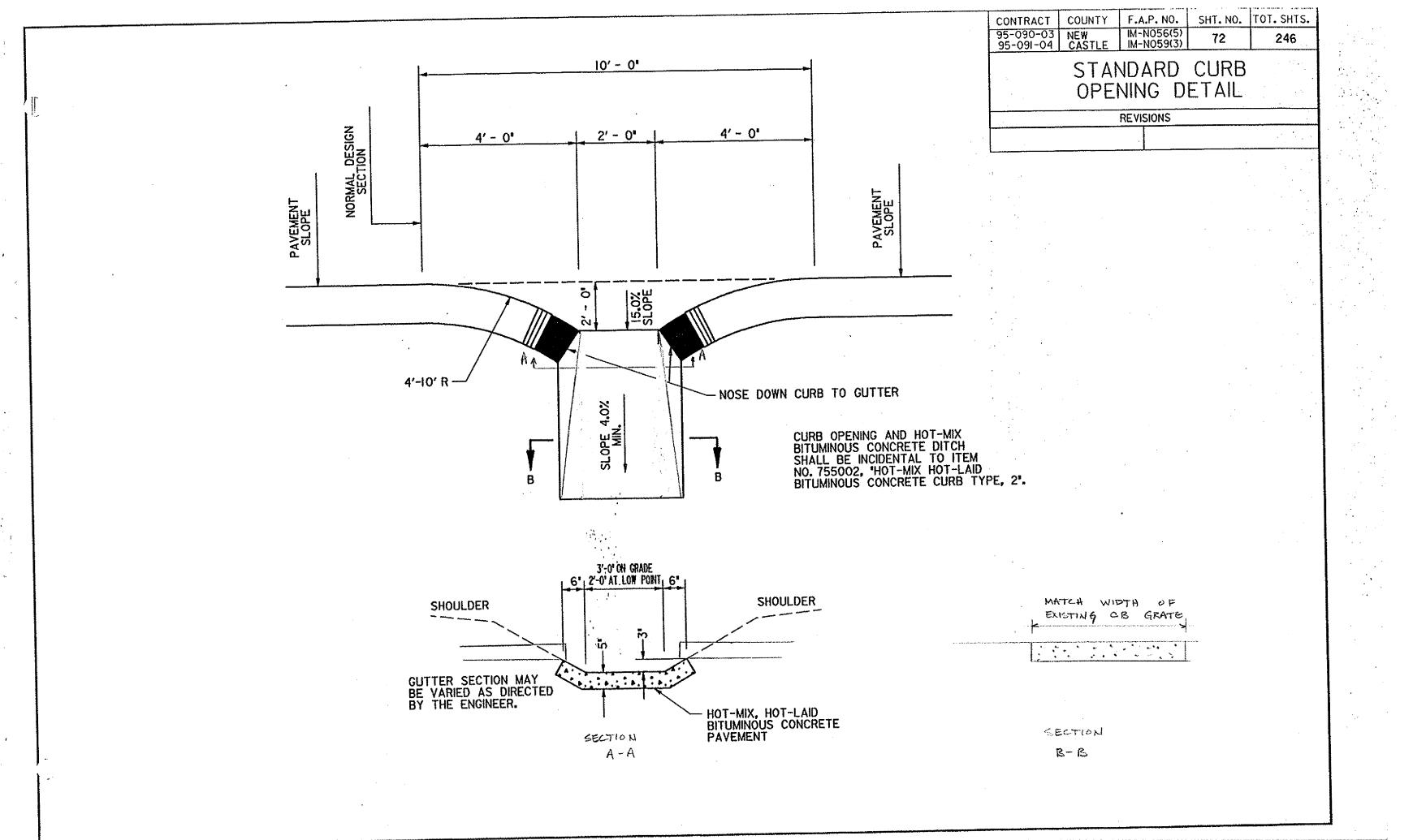
95-090-03 NEW IM-N056(5) 71 246 ADJUST MANHOLE AND CATCH BASIN/JUNCTION BOX FRAMES	CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHIS
ADJUST MANHOLE AND CATCH	95-090-03	NEW CASTLE	IM-N056(5) IM-N059(3)	71	246
	BASIN	/JUNC	TION BO	X FRAI	VES
REVISIONS	DAOIN	7 00110			:



ADJUST MANHOLE FRAME (NOT TO SCALE)



ADJUST CATCH BASIN/JUNCTION BOX FRAME (NOT TO SCALE)



FULL-WIDTH, FULL-DEPTH, PCC PATCH

- 1. The limits of the patch shall be determined in the field by the Engineer through visual examination and sounding the existing pavement with a hammer. An additional length of approximately 12 inches of sound concrete on each end shall be included within the patch area designated for removal. If an existing joint area is within the patch area, at lest two (2) feet beyond the joint line will be designed for removal. Only the areas marked by the Engineer will be measured for payment, with maximum patch length to be forty feet (40"). Lengths greater than forty feet (40") to become slab replacement item.
- Saw cut for pavement removal will be vertical, full-depth, and paid for under Section 762002 - Saw Cutting Concrete. No separate payment shall be made for cutting through existing hot mix overlay. All existing longitudinal joint tie steel extending into the patch area shall be cut flush to the face of the existing slab, to be incidental to Section 50300() - Patching PCC Pavement.
- 3. The removal of the existing concrete and hot mix overlay shall be executed with minimal disturbance to the remaining concrete or foundation. Any damage beyond the limits of the patch caused by the improper actions of the Contractor shall be repaired to the satisfaction of the Engineer at no cost to the State.

Damaged or unsound concrete in slab edges adjacent to the patch shall be corrected either by extending the patch boundaries or, if longitudinal, repaired using an epoxy mortar without relocation of the longitudinal joint. Payment for corrections, if not caused by the contractor's operations, shall be by the applicable pay items, unless longitudinal, then the payment shall be incidental to Section 50300() - Patching PCC Pavement. Corrections needed due to the contractor's operations will be repaired at the contractor's expense.

4. The foundation shall be examined by the Engineer. Pumping or similar movement that indicates instability will require corrective action, that shall include excavation and replacement of the existing foundation to a maximum depth of six (6) inches. This excavation is to be paid for under Section 212001 - Undercut Excavation, Patching with the replacement material to be Concrete (SY/IN.) paid for under Section 503503 - Patching Concrete.

Excessive moisture below the above-mentioned corrective action may indicate the need for underdrain placement. Underdrain to be placed at center of patch or as directed by the Engineer with a minimum of 3' from nearest transverse joint. Pipe and filter fabric to be incidental to Section 715006 - Perforated Pipe Underdrain, 4" PCC Patch. Excavation is to be paid for under Section 212001 - Undercut Excavation, Patching. Underdrain and sand box are to extend through shoulder to existing drainage system. Payment for restoration of shoulder disturbed for the placement of underdrain pipe to be paid for under applicable items.

- 5. The Contractor shall remove pavement only at those areas that can be poured by sunset of the same day and his operations shall provide for the inclusion of possible underdrain construction. To maintain traffic, refer to the latest revised version of the manual titled "DELAWARE TRAFFIC CONTROLS FOR STREETS AND HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS. In effect on date of advertisement for bids. Also, on four-lane divided highways, one tane in each direction is to remain open at all times. Any patch areas which, during non-working hours, have a grade difference of more than two (2) inches from the normal traveling surface shall be filled at the contractor's expense with TRM material and shall conform to the requirements of Section 763500 Maintenance of Traffic.
- 6. Patches to be either less than sixteen feet (16') in length without reinforcement, or sixteen feet (16') greater in length with reinforcement. The steel wire mesh reinforcement shall be placed conforming to the requirements of AASHTO M-32 or M-55, of longitudinal 2 wire at 6 inches on center and transverse 4 wire at 12 inches on center. The mesh shall be placed to result in 3 to 4 inches of concrete cover to the surface and sides of the patch and be incidental to Section 50300() Patching PCC Pavement.

- 7. On one transverse side of the patch, ½-inch thick cork or rubber filler material conforming to the requirements of AASHTO M-153 shall be placed directly against the face of the existing concrete. It shall extend across the full width of the transverse joint and from the bottom of the existing concrete slab to ½-inch of the top surface of the slab, or as needed by the sealant system requirements and shall be incidental to Section 50300() Patching PCC Pavement.
- 8. The surface edges of all patches where adjacent to concrete shall be tooled, formed, sawed, etc., to result in a properly dimensioned reservoir for sealant and shall be incidental to Section 50300() Patching PCC Pavement and shall conform to the requirements of the applicable Special Provisions.
- 9. A patch area shall not be closer than ten (10) feet to an existing joint. If so, removal of the remaining length to the joint will be made, as well as the (2) feet past the joint line. For areas where the existing joint is removed, the joint will be relocated in accordance with the Dowelled Joint Location Schedule and reconstructioned with a new load transfer system. If more than one existing dowelled joint is affected by continuous patching operations placement of load transfer systems shall be completed as directed by the Engineer.

A load transfer system will consist of smooth epoxy-coated dowel bars with dimensions of 1½-inch diameter and 18 inches long for a designed pavement thickness of 10 inches or less and 1½-inch diameter and 18 inches long for a designed pavement thickness greater than 10 inches, paid for under Section 503006 - Dowel Bars. Hole diameter should be dowel diameter plus ½-inch when using cement grout and dowel diameter 1/16-inch when using epoxy grout. It is critical that each smooth dowel is placed parallel with the centerline of the slab, both vertically and horizontally. An expansion spacer cap shall be placed on the end of the dowel such that at least one inch (1") of free space is provided.

A nylon or plastic grout retention disk shall be used during insertion of the dowel bar to help avoid the loss of grout material from the hole.

10. Where a fixed joint is required, deformed epoxy-coated steel bar conforming to the requirements of AASHTO M-31 grade 60, with dimensions of 1½-inch diameter and 18 inches long, shall be placed in 1½-inch drilled holes as shown on plans and be paid for under Section 503005 - Deformed Bars.

Longitudinal pavement slabs shall not be tied together.

- 11. A bond breaker shall be placed on any concrete face along the longitudinal joints exposed within the patch. Polyethylene sheet, a coat of approved latex paint, or an approved alternate system may be used, as directed by the Engineer, to prevent bonding between the new and existing concrete, payment to be incidental to Section 50300() Patching PCC Pavement.
- 12. Forms are required that will provide a patch with vertical sides for the full depth of patch. Also, shoulder paving adjacent to the slab replacement damaged or removed due to operations during construction, shall be repaired in kind or better and compensation to be incidental to Section 50300() Patching PCC Pavement.
- 13. The cross section of the first ten (10) feet in the direction of traffic of the patch shall be finished to match the existing cross section of the roadway (any existing rutting will be continued for that depth). A broomed texture is required and shall be incidental to Section 50300() Patching PCC Pavement.
- 14. An approved curing compound shall be applied uniformly. Immediately upon completion of the patch texturing and shall be incidental to Section 50300() Patching PCC Pavement.

		F.A.P. NO.	JU: NO.	TOT. SHTS.	i
95-090-03 95-091-04	NEW CASTLE	IM-N056(5) IM-N059(3)	73	246	
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-			P.C.C. PAVEMENT	P.C.C. PAVEMENT PATC	P.C.C. PAVEMENT PATCHING DETAILS AND NOTES

REVISIONS

- 15. Where a proposed patch area abuts existing concrete curb that will remain in place, the contractor shall saw cut the existing pavement parallel to and no greater than 1 ft. from the face of the curb. Payment for saw cutting shall be included in the unit price bid for Item 762002 Saw Cutting Concrete (Full Depth). Removal of up to a 1 ft. strip of concrete pavement shall be paid for under Item 75800 Removal of Existing PCC Pavement, Curb, Sidewalk, Etc. Any damage to the curb shall be repaired in kind by the contractor at his own expense.
- 16. Vertical Transition the average depth of the dowel measured from the top of the dowel to the pavement surface: the allowable tolerance from the top of the pavement to centerline of the dowel is one half the pavement thickness: ±1".

Vertical Rotation - the difference in depth (vertical position) between the midpoint and the exposed end of the dowel: the allowable tolerance is %-inch of vertical deviation from the true longitudinal axis of the pavement.

Horizontal Rotation - the difference in lateral position between the midpoint and the exposed end of the dowel: the allowable tolerance is 1/2-inch of horizontal deviation from the true longitudinal axis of the pavement.

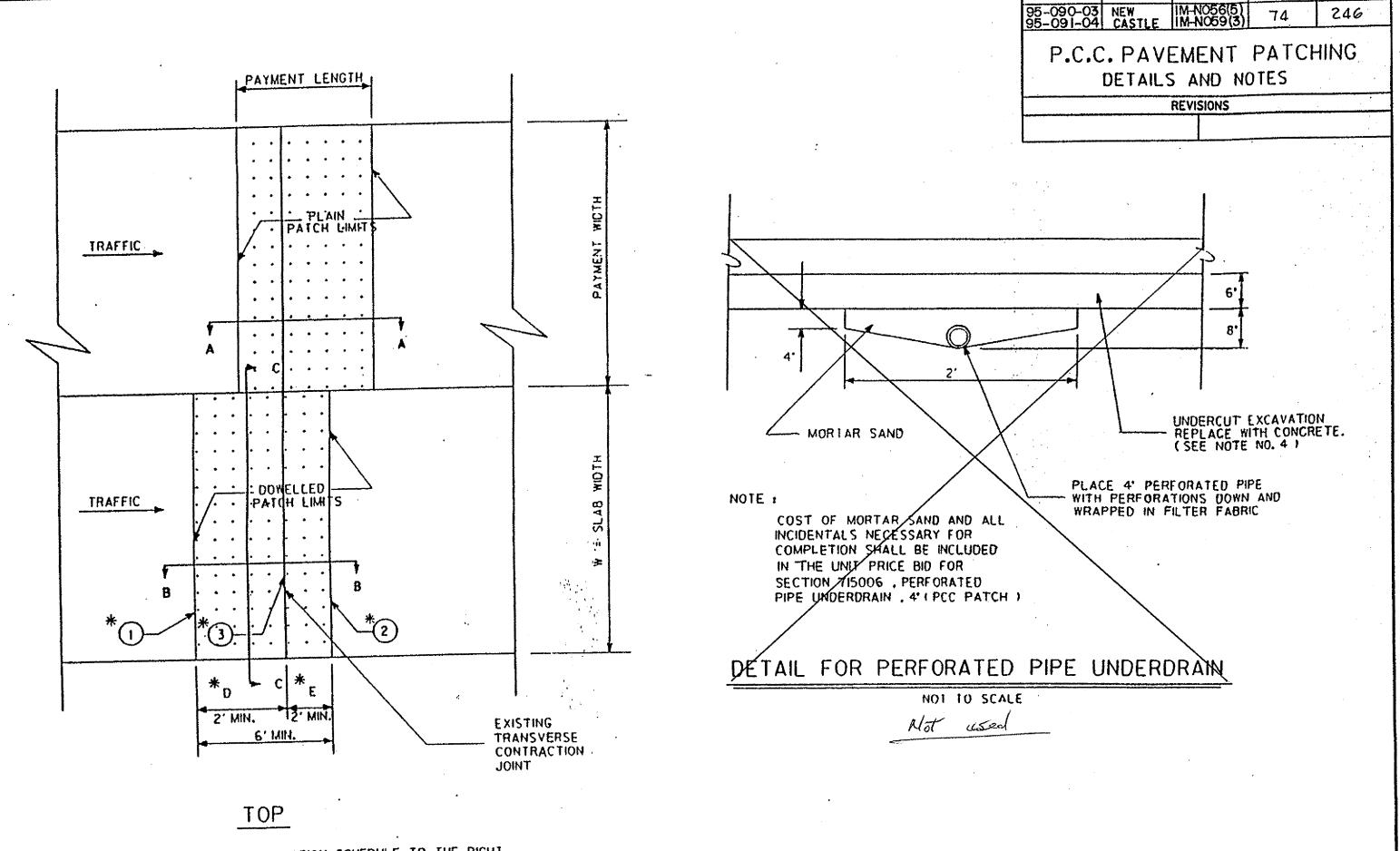
Longitudinal Translation - the longitudinal offset between the exposed end of the dowel and the edge of the patch: the allowable tolerance is: ± 1 ".

Horizontal Translation - the average lateral spacing measured from centerline of dowel to the centerline of dowel: the allowable tolerance is 12 inches: ± 1 ".

Pay Items Associated with PCC Pavement Patching

503003 - Patching PCC Pavement, less than 16', Type 1	-S.Y.
503004 - Patching PCC Pavement, 16' and over, Type II	-S.Y.
715006 - Perforated Pipe Underdrain, 4" (PCC Patch)	-L.F.
762002 - Saw Cutting Concrete	-L.F.
212001 - Undercut Excavation, Patching	-C.Y.
503503 - Patching Concrete	-S.Y./IN.
503006 - Dowel Bars	-EA.
503005 - Deformed Bars	-EA.
307000 - Crusher Run (TRM)	-TON
402000 - Hot-Mix Hot-Laid Bituminous Concrete and/or	
Cold-Laid Bituminous Concrete (TRM)	-TON
758000 - Removal of Existing P.C.C. Pavement, Curb,	
Sidewalk, etc.	-S.Y.

Notes applicable to dowelled joints



TOT. SHTS.

SHT. NO.

F.A.P. NO.

COUNTY

CONTRACT

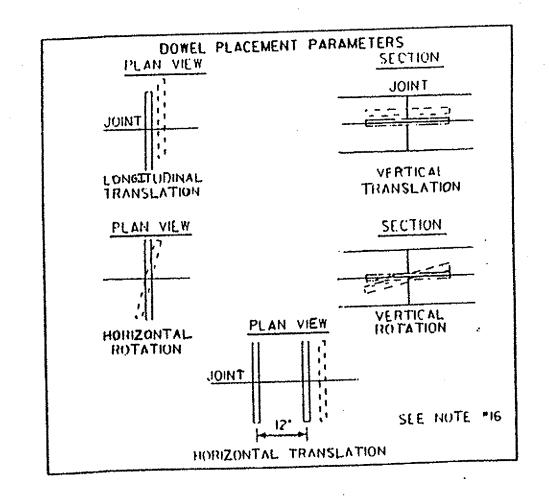
PATCH BOUNDARY DISTANCES	TYPE OF JOINT REQUIRED
If $D \leq 3'$ and $D \leq E$ then If $E \leq 3'$ and $E \leq D$ then	(1) W.C.J.(2) F.C.J.(3) N.J. (1) F.C.J.(2) W.C.J.(3) N.J.
If D and E > 3' then If no existing tranverse Joint is encountered.	1 F.C.J. 2 W.C.J. 3 N.J. 1 F.C.J. 2 W.C.J. 3 N.J.

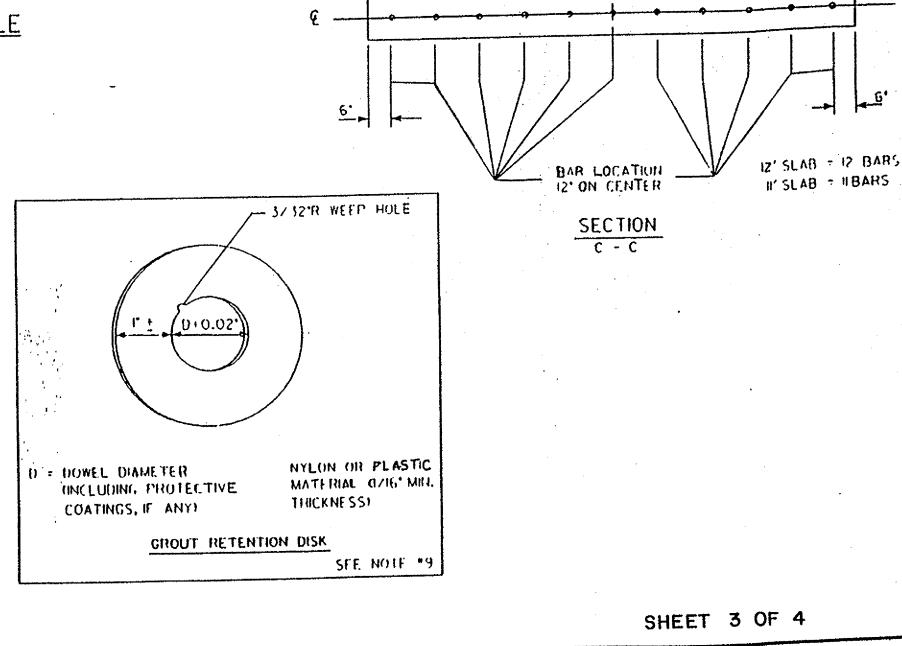
W .C.J. = Working contraction joint (Dowelbars) .

F.C.J.: Fixed construction joint (Deformed bars)

N.J.: No contraction / construction joint required in patch

DOWELLED JOINT LOCATION SCHEDULE





SHT. NO. | TOT. SHTS

246

7.5

CONTRACT COUNTY

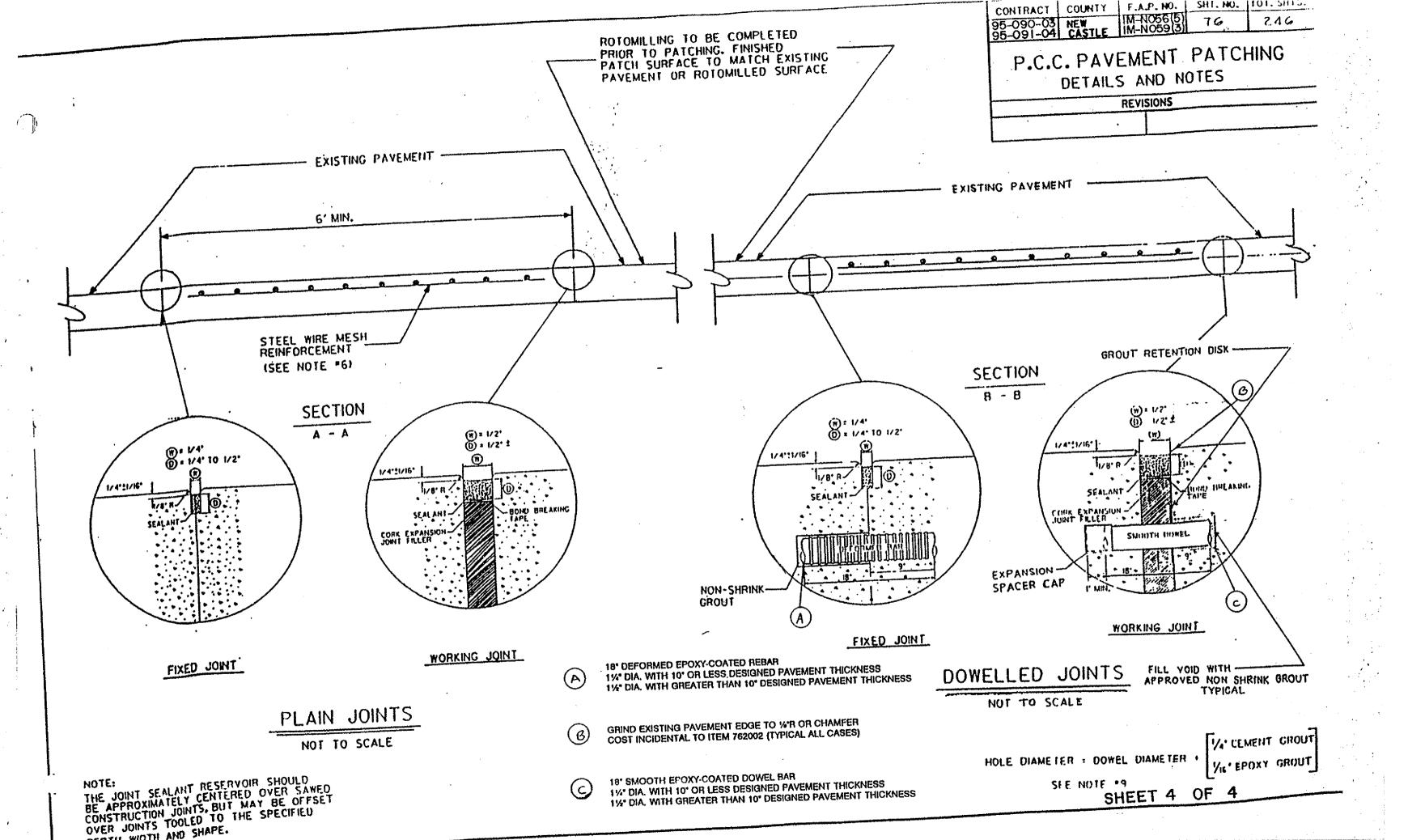
W = SLAB WIUTH

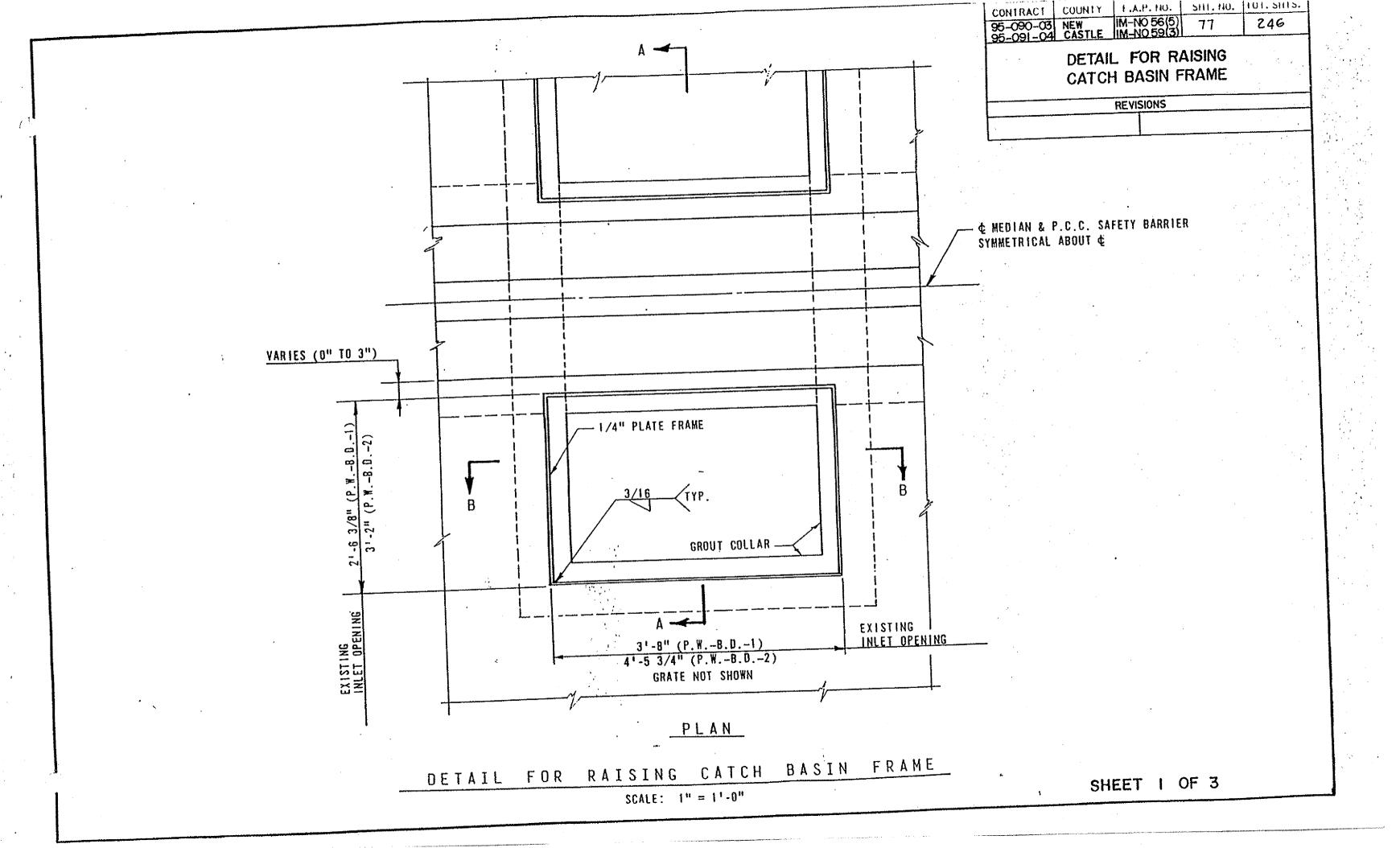
F.A.P. NO.

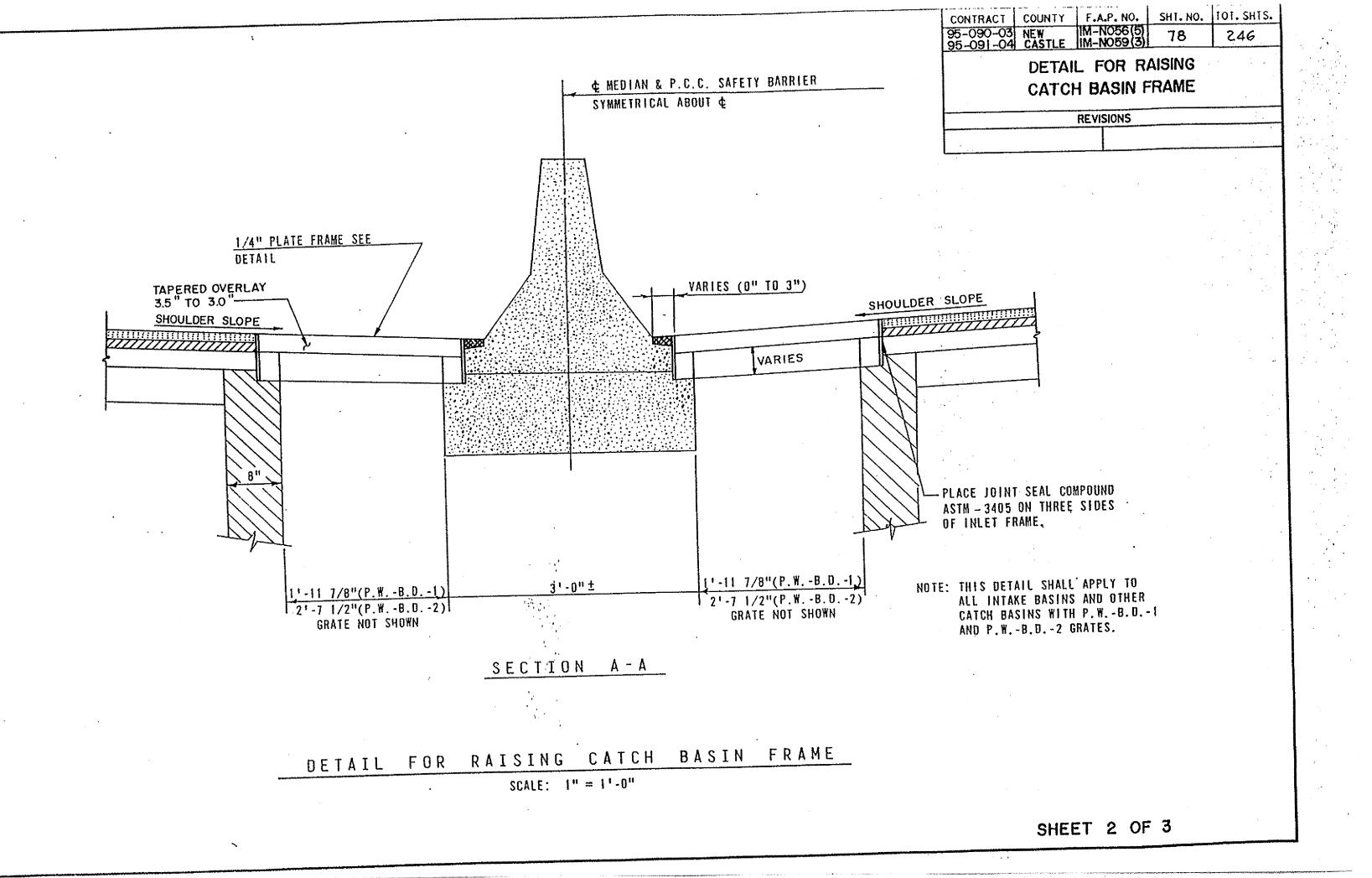
P.C.C. PAVEMENT PATCHING

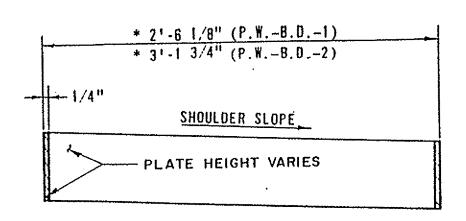
DETAILS AND NOTES

REVISIONS



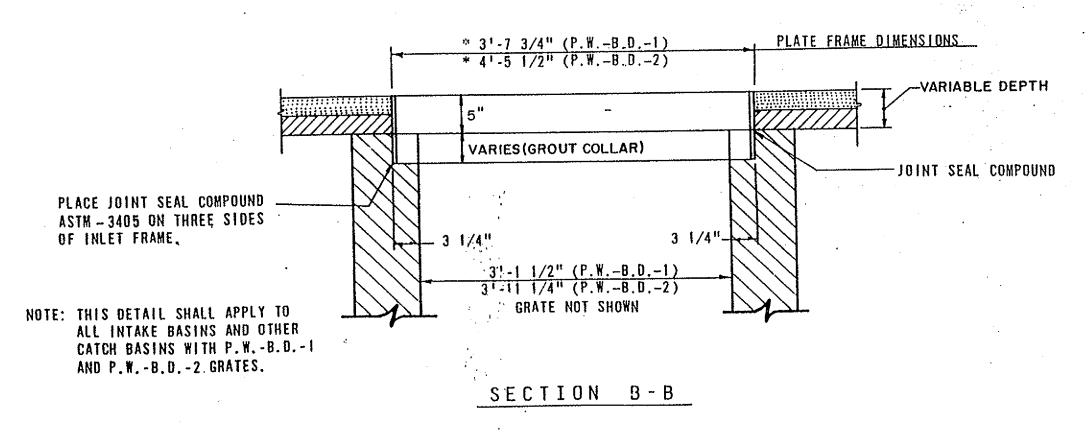






DETAIL OF PLATE FRAME

* THE CONTRACTOR SHALL FIELD CHECK THE DIMENSIONS OF EACH GRATE OPENING AND CONSTRUCT THE PLATE FRAME USING THE FIELD DIMENSIONS.



DETAIL FOR RAISING CATCH BASIN FRAME

SCALE: $1^n = 1^n - 0^n$

SHEET 3 OF 3

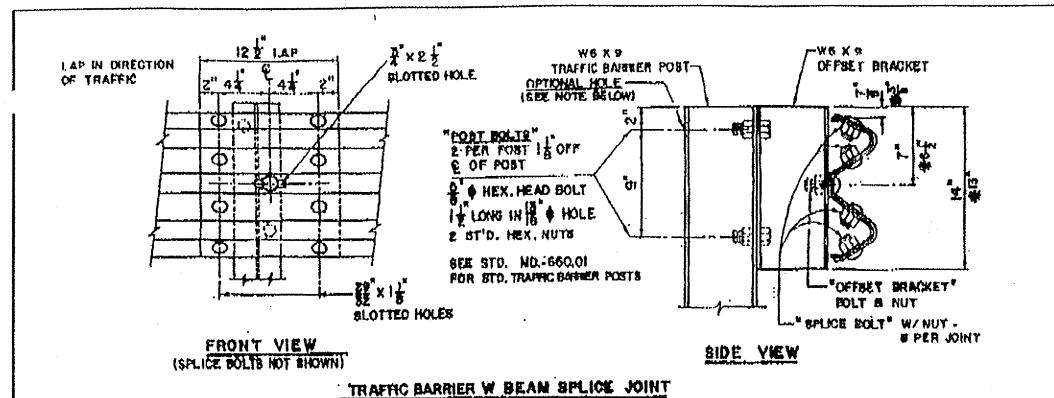
CONTRACT COUNTY | 1.A.P. NO. | SHI. NO. | 101. SHI5.

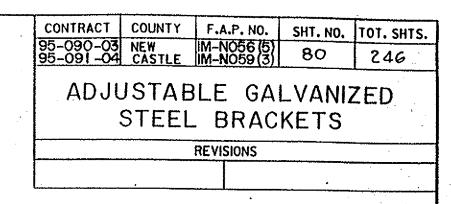
DETAIL FOR RAISING CATCH BASIN FRAME

REVISIONS

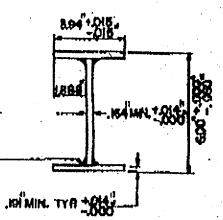
246

95-090-03 NEW IM-N056(5) 95-091-04 CASTLE IM-N059(3)

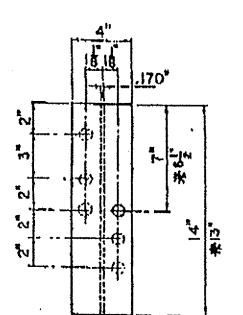




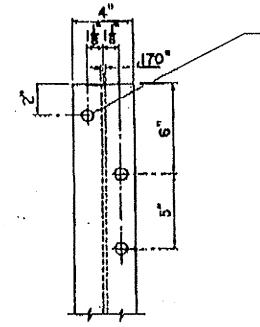
ASTM-A 769 HIGH FREQUENCY RESISTANCE WELD. THE WELD JOINT MUST DEVELOP STRENGTH EQUAL TO OR EXCEEDING THE FULL STRENGTH OF THE WEB MATERIAL (MATERIAL GRADE ASTM-A36) GALVANIZED COATING SHALL BE AASHTO M III.



NOTE: HOLE ARRANGEMENT IN THE POST AND OFFSET BRACKET IS DESIGNED TO ALLOW FOR THE FUTURE ROADWAY RESURFACING WHEREBY THE OFFSET BRACKET MAY BE RAISED AS NECESSAY TO ACHIEVE THE DESIRED HEIGHT OF TRAFFIC BARRIER.



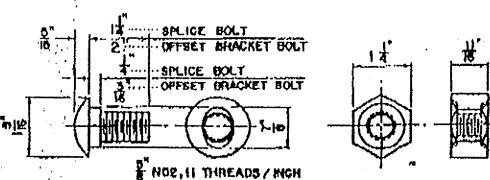
FRONT VIEW OFFBET BRACKET



FRONT VIEW POST

INSTALLATION AFTER 1981 * INSTALLATION PRIOR 1981

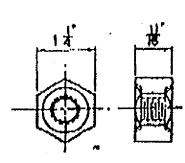
OPTIONAL HOLE - THIS HOLE MAY BE DRILLED THROUGH BOTH POST FLANGES TO CREATE AN ADDITIONAL HOLE FOR RACKING POSTS WHEN GALVANIZING. (HOLE LOCATION SHOWN ON SIDE VIEW)



SPLICE BOLT" B"OFFSET BRACKET BOLT

8 PER JOINT 11 LONG

I PER BRACKET 2" LONG



B PER SPLICE

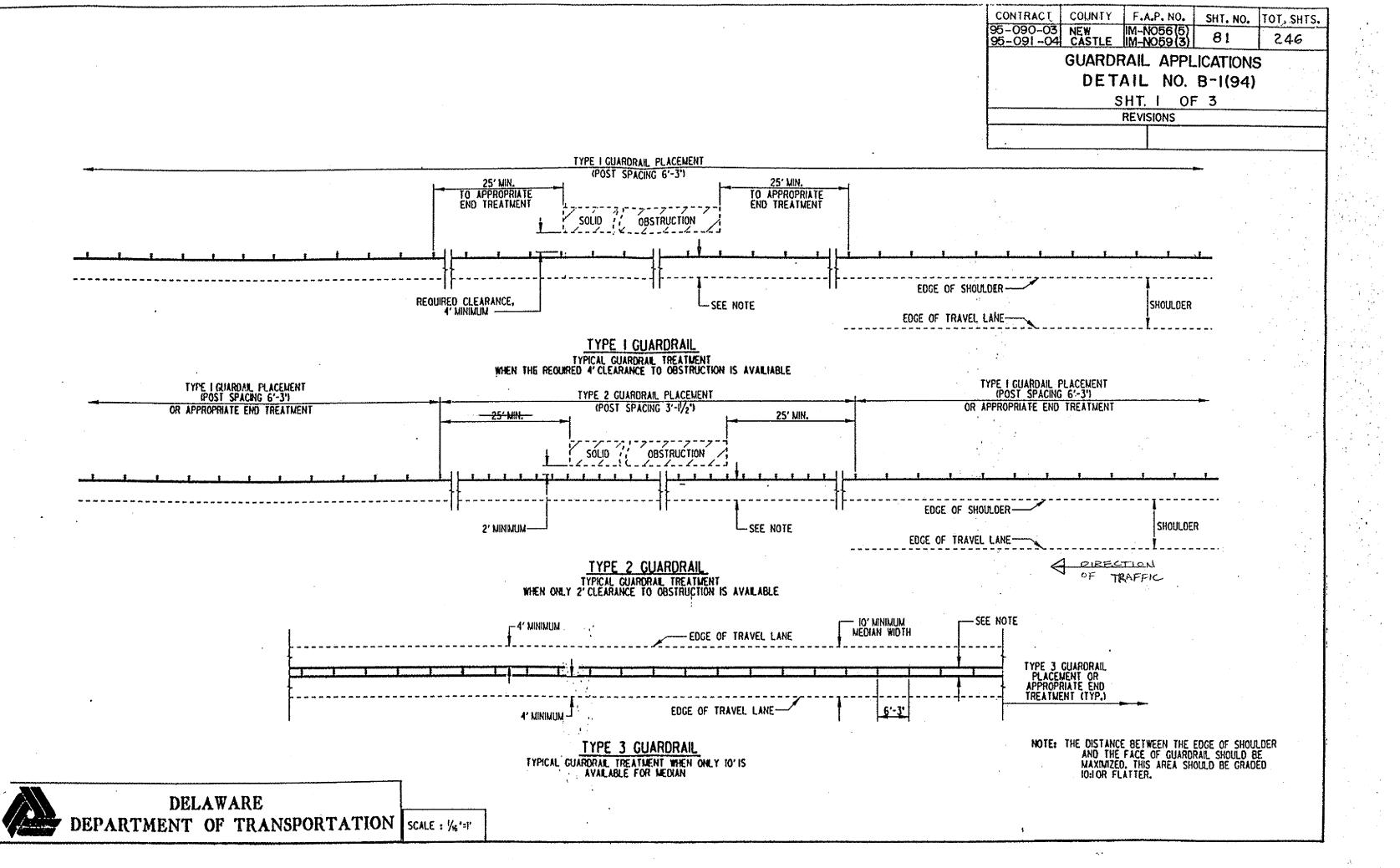
ALTENATE - SINGLE RECESS NUTS NCE, II THREADS / NOH MAY BE SUBSTITUTED

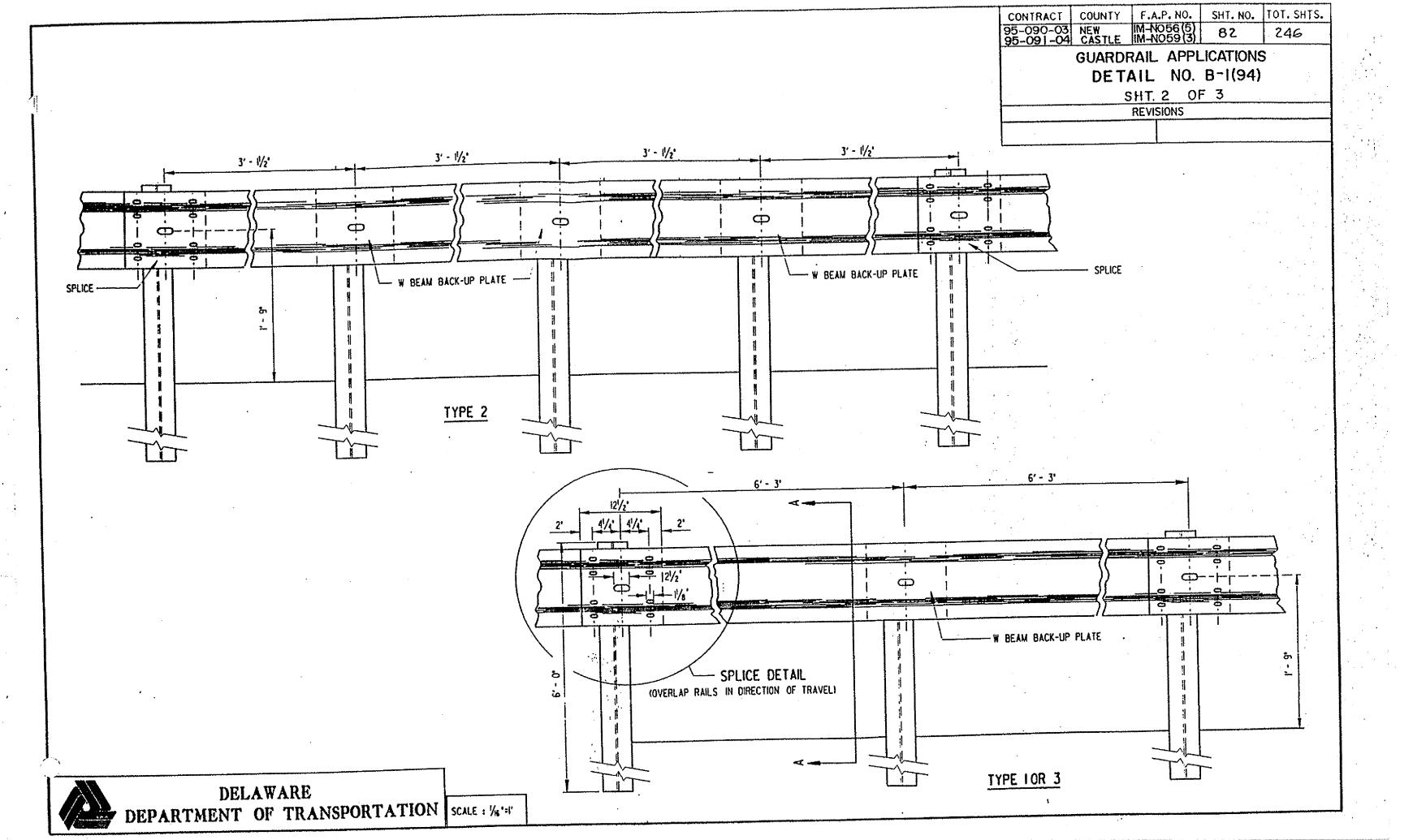
NOTE: EXCEPT FOR THE DIMENSIONS SHOWN ON THE W6 X 8.5 PLAN VIEW ALL DIMENSIONS FOR HOLES, HOLE SPACING, LENGTHS, ETC. WILL REMAIN THE

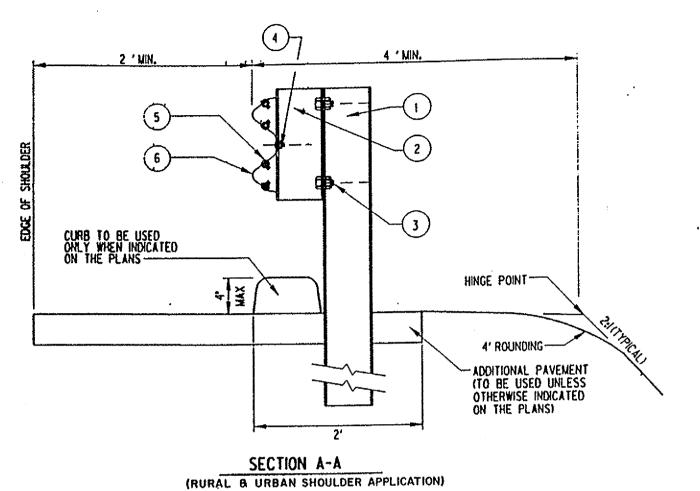
SAME AL THEY ARE FOR THE W6 X 8 POSTS AND

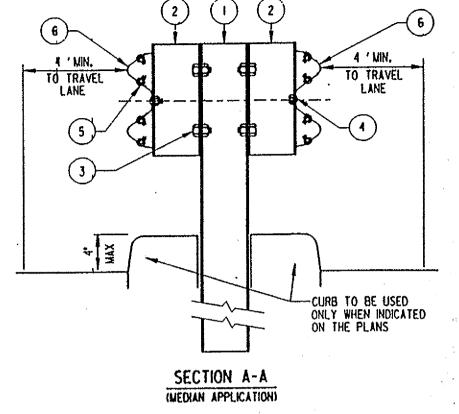
IN DIA. X DEEP RECESS TWO SIDES

OFFSET BRACKETS



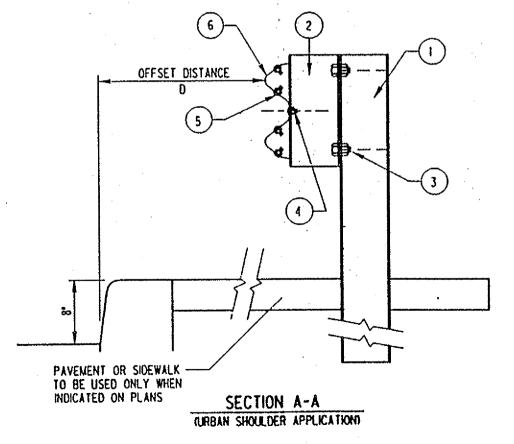




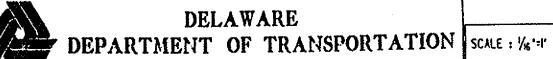


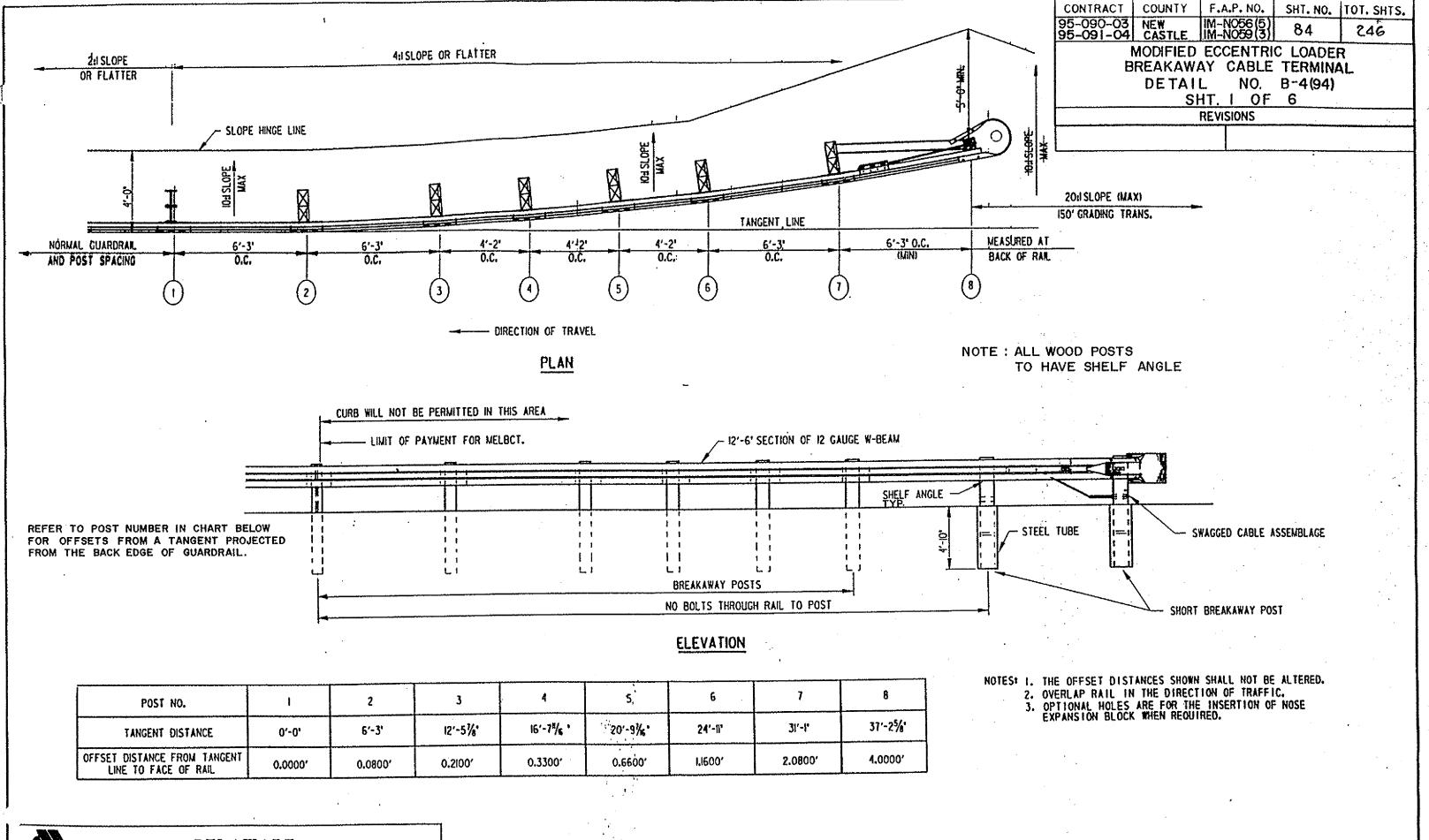
ONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHTS.
5-090-03 5-091 <i>-</i> 04	NEW CASTLE	IM-N056(5) IM-N059(3)	83	246
		RAIL APPL	ICATIONS	S
	DET	AIL NO.	B-1(94))
	5	SHT. 3 OF	3	
		REVISIONS	-	

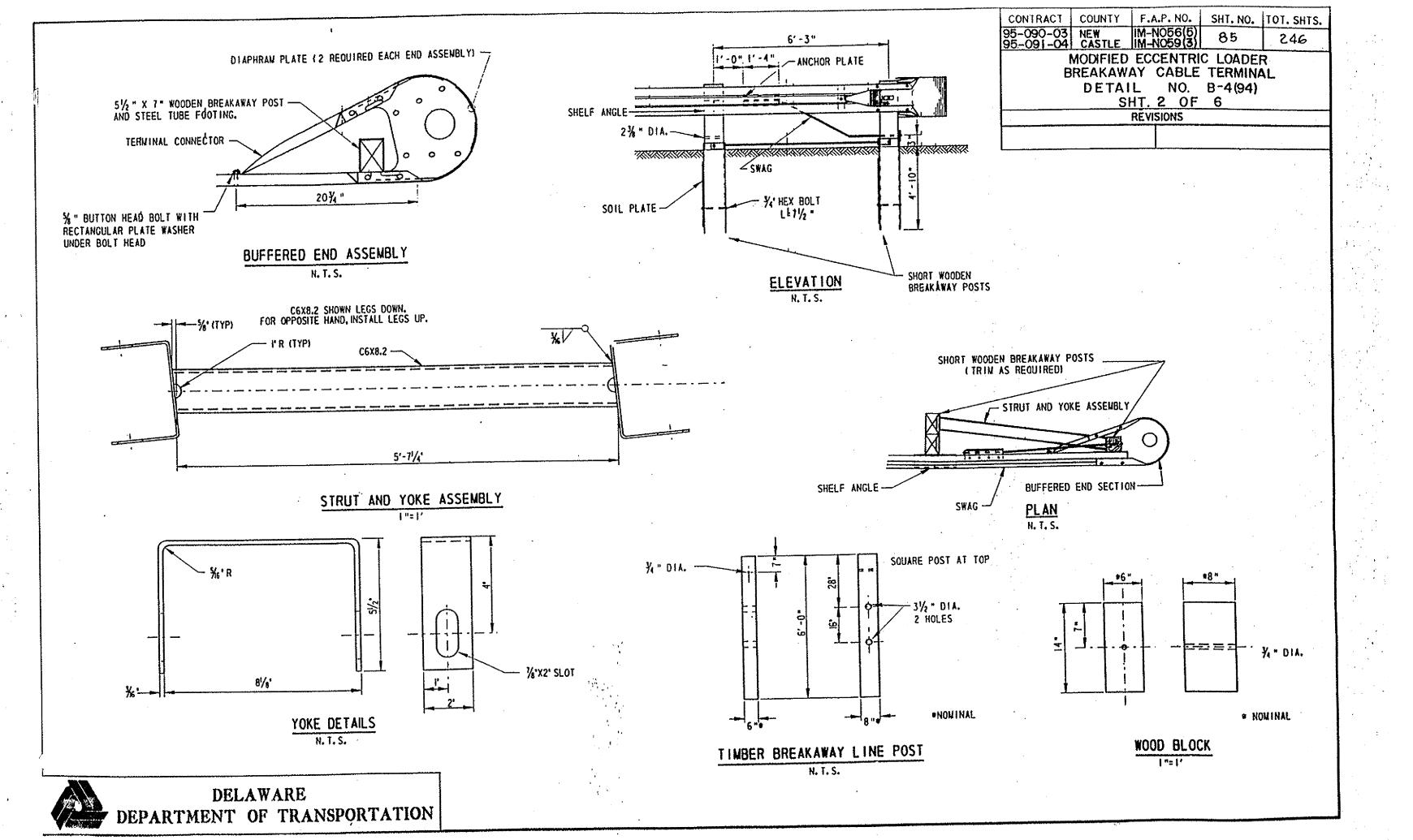
DESIGN SPEED (MPH)	D (FT)	
< 40	6	
<u>></u> 40	10	



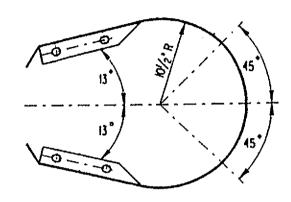
	LEGEND			
NO.	DESCRIPTION			
<u>(1)</u>	W 6 × 9 STEEL POST			
2	W 6 x 9 STEEL OFFSET BLOCK			
3	%' HEX BOLT, WASHER, NUT (L = 1/2')			
•	% BUTTON HEAD BOLT, RECTANGULAR WASHER, NUT (L = 2")			
5	% BUTTON HEAD BOLT, WASHER, NUT (L = 11/4")			
6	W BEAM			



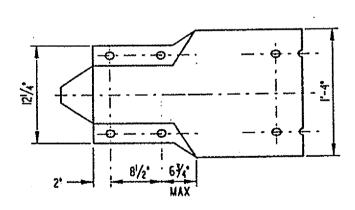




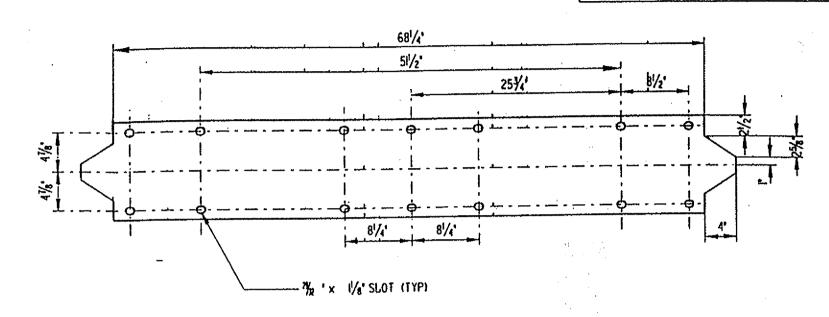
AP AAA AMI				TOT. SHTS.
95-090-03	NEW CASTLE	IM-N056 (5) IM-N059 (3)	86	246
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BUFFERED END SECTION PLAN

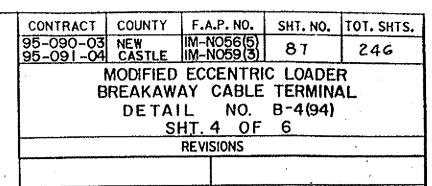


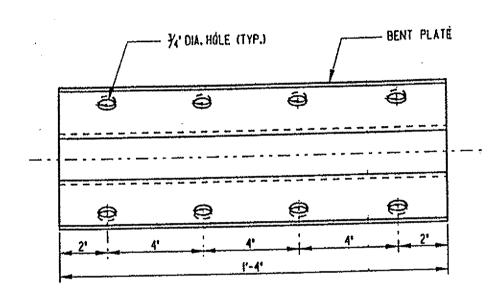
BUFFERED END SECTION ELEVATION

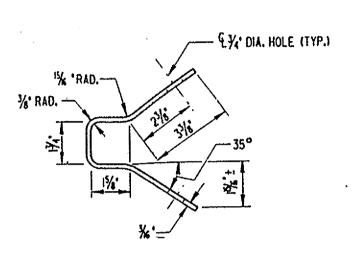


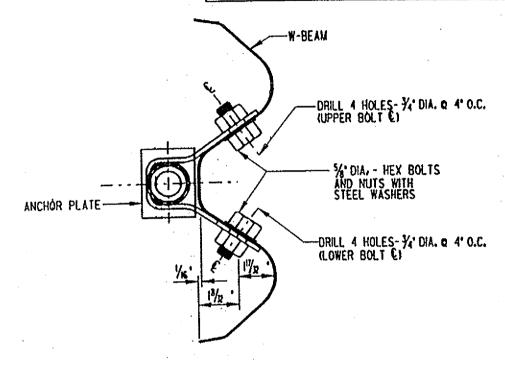
BUFFERED END SECTION FLAT PLATE LAYOUT

NOTES: I. ALL SLOTS % 'x 1/6'
2. ALL BOLTS % 'HEX BOLTS 1/4' LENGTH



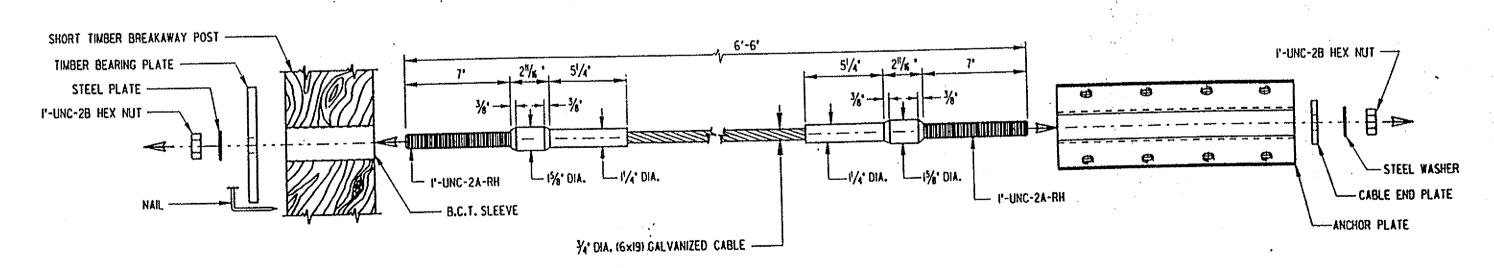


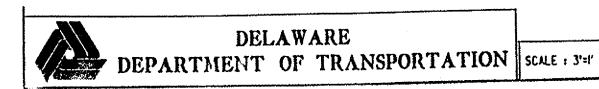




ANCHOR PLATE

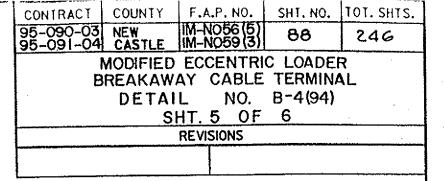
ANCHOR PLATE TO W-BEAM CONNECTION DETAIL

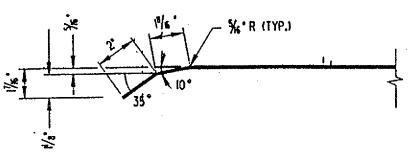




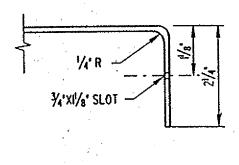
SWAGGED CABLE ASSEMBLAGE AND RELATED
FASTENER HARDWARE ASSEMBLY SEQUENCE

NOTES: TO ENSURE THAT THE TIMBER BEARING PLATE REMAINS IN POSITION, TWO EIGHT PENNY GALVANIZED STEEL NAILS SHALL BE DRIVEN IN THE SHORT TIMBER BREAKAWAY POST, AND BENT OVER BEARING PLATE.

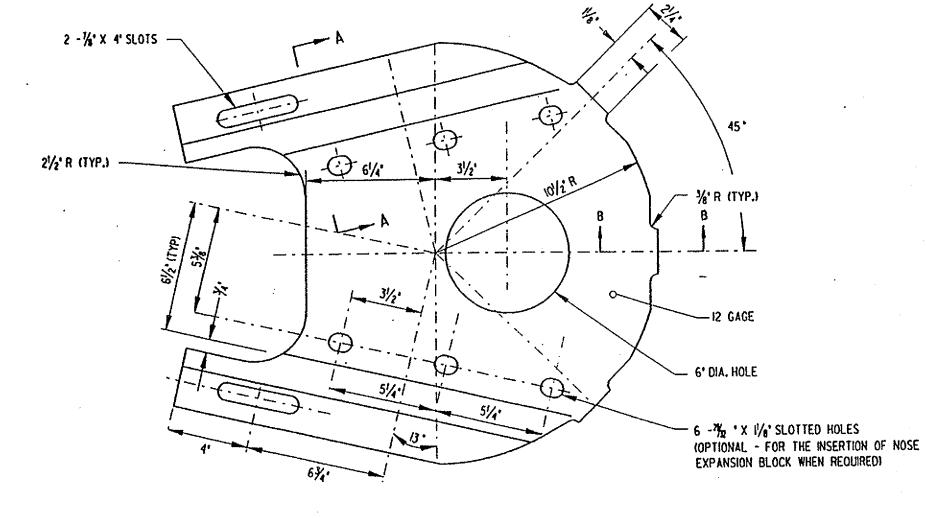








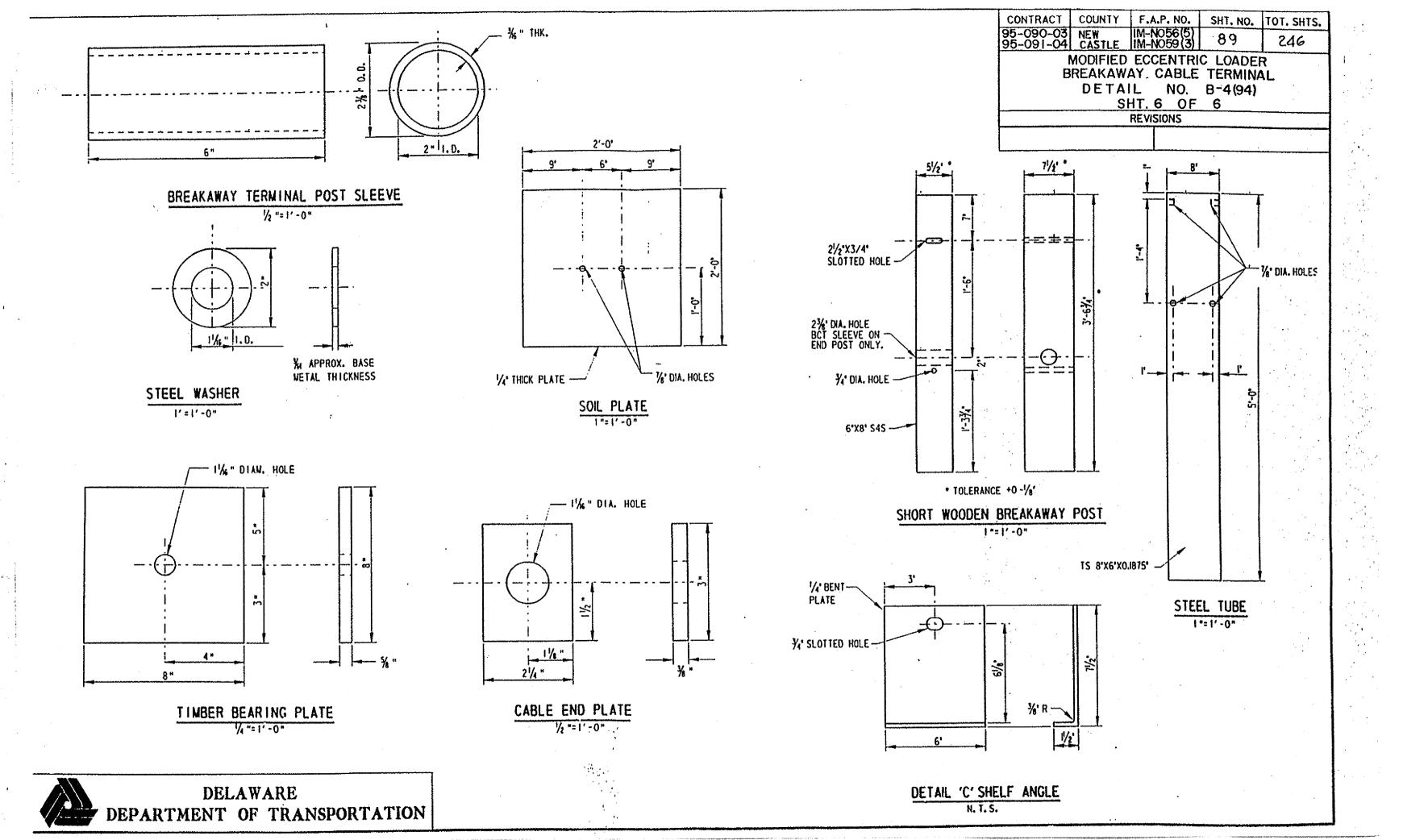
SECTION B-B

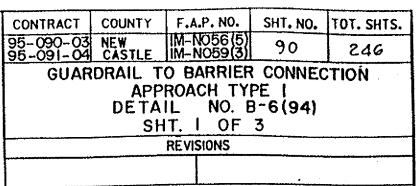


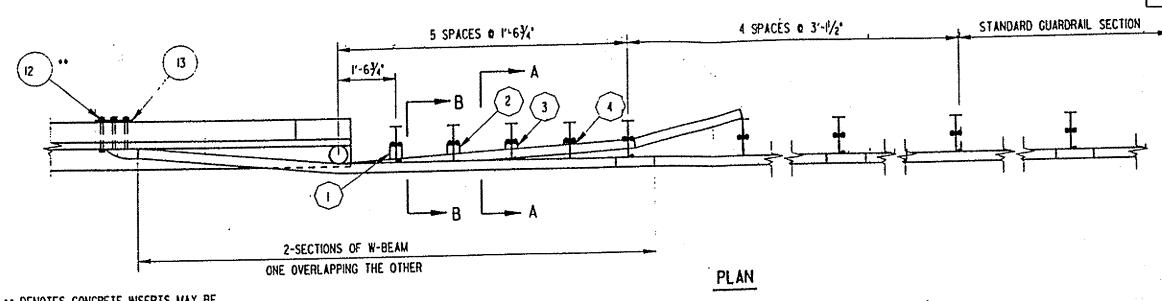
O 1 APHRAM PLATE DETAIL (2 REOURED EACH TERMINAL)



DELAWARE
DEPARTMENT OF TRANSPORTATION SCALE : N.I.S.

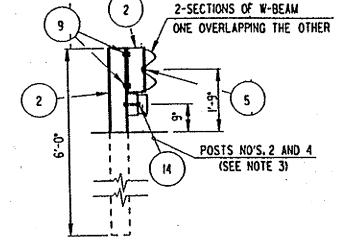




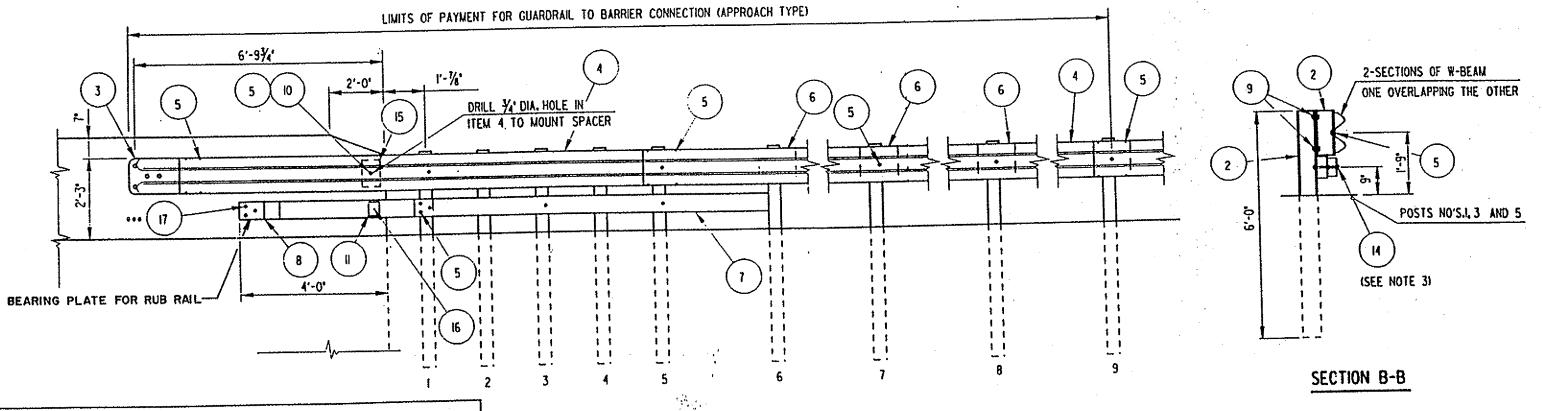


•• DENOTES CONCRETE INSERTS MAY BE USED IN NEW CONSTRUCTION.

••• DENOTES PLACE WASHERS (ITEM I)
BETWEEN BOLT HEAD AND RUB RAIL.



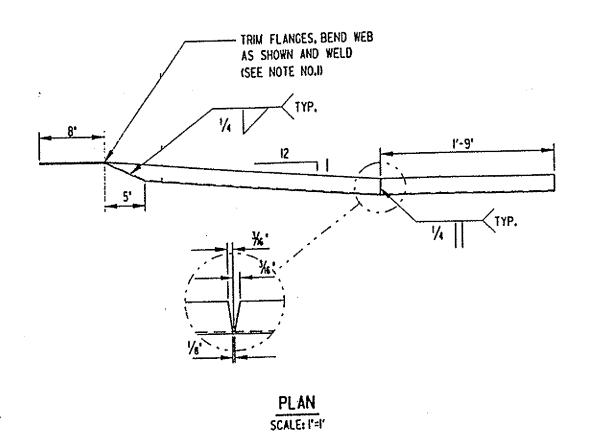
SECTION A-A

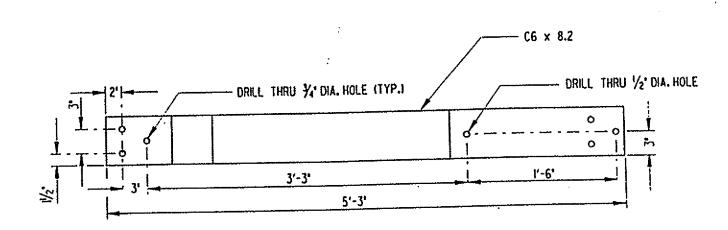


DELAWARE
DEPARTMENT OF TRANSPORTATION | SCALE : **'=1"

ELEVATION

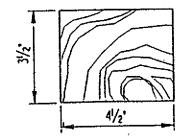
NOTE: SEE SHEET NO. 2 & 3 FOR RUB RAIL DETAIL AND LEGEND.



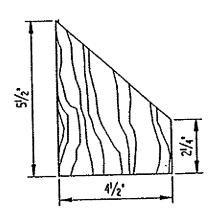


C6 x 8.2 RUB RAIL ELEVATION (ITEM 8)

SCALE: P=P



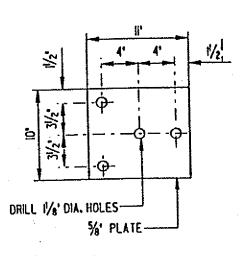
WOOD BLOCKOUT PLAN (ITEM II) SCALE: 3'=1'



WOOD BLOCKOUT ELEVATION (ITEM II) SCALE: 3'=1'

RUB RAIL WOOD BLOCKS (7° X 4°)			
BLOCK	THICKNESS		
1	41/41		
2	31/4*		
(3)	2'		
4			

CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHTS.		
95-090-03	NEW CASTLE	IM-NO56(5) IM-NO59(3)	91	246		
GUARDRAIL TO BARRIER CONNECTION,						
APPROACH TYPE 1 DETAIL NO. B-6(94)						
SHT. 2 OF 3						
RÉVISIONS						



BEARING PLATE DETAIL

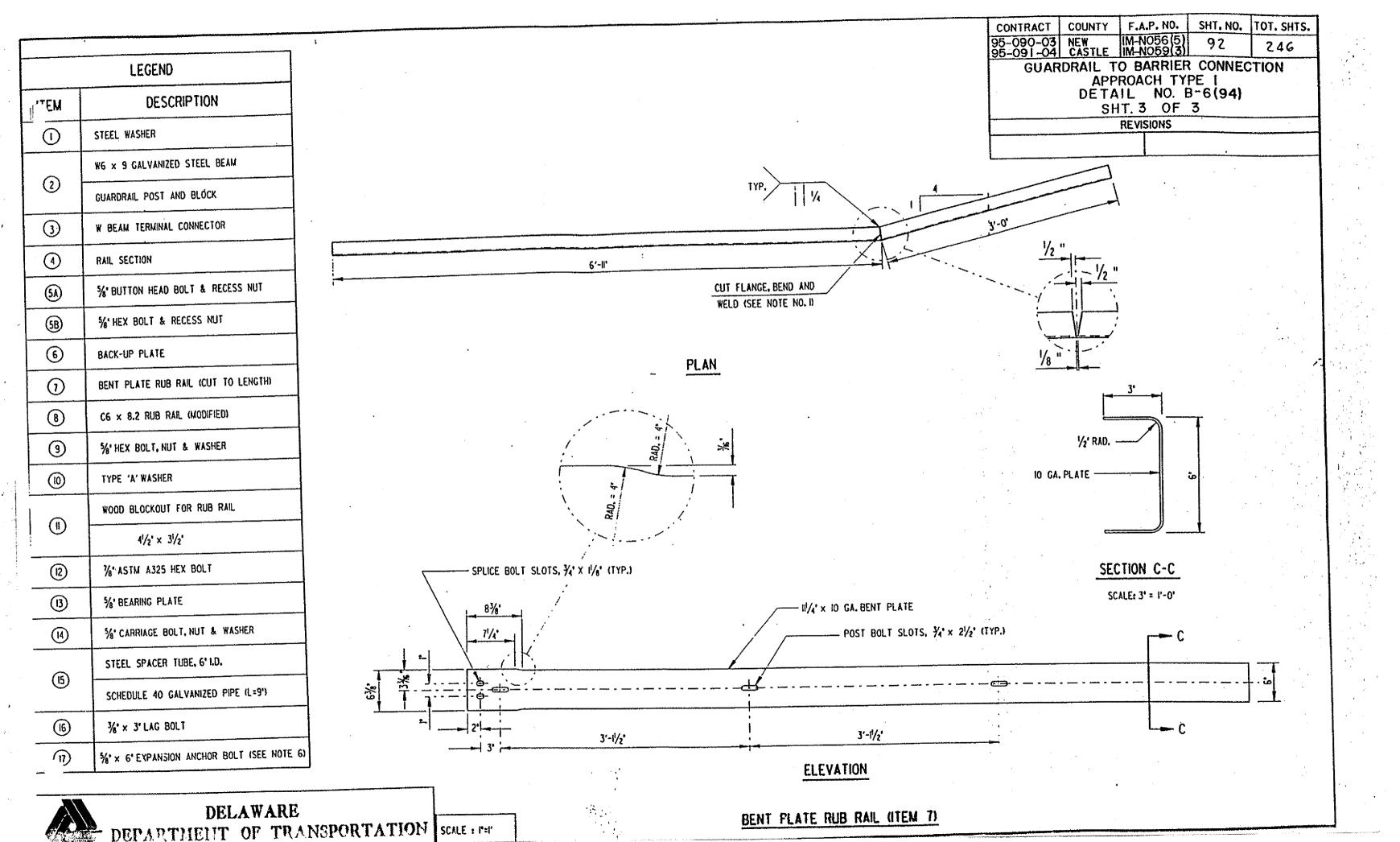
(ITEM 13)
SCALE: 11/2'=1'

NOTES: II. RUB RAIL CAN BE FIELD BENT USING HEAT.

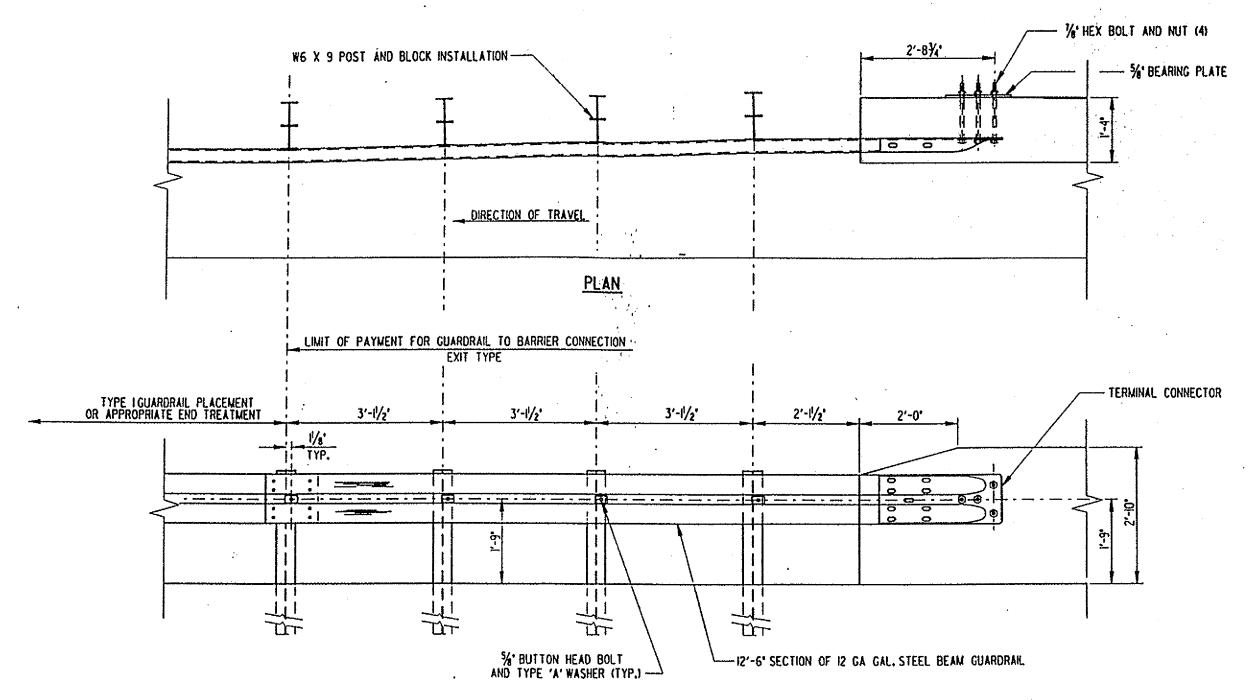
- 2). POSTS I-5 REQUIRE AN ADDITIONAL HOLE TO ATTACH LOWER BLOCKS AND/OR RUB RAIL.
- 3). BOTTOM WOOD BLOCKS LOCATED ON POSTS I-4 ARE CENTER DRILLED AND SECURED WITH % CARRIAGE BOLTS.
- 4). W BEAM IS NOT BOLTED DIRECTLY TO POSTS 2-4, 6, & 8. BOLT DIRECTLY TO POSTS ONLY.
- 5). APPROVED CONCRETE INSTERTS MAY BE USED IN NEW CONSTRUCTION TO ATTACH TERMINAL CONNECTOR TO PARAPET.
- 61. MAY SUBSTITUTE 3-5/8' ASTM A325 THROUGH BOLTS WITH BEARING PLATE.
- 7), RUB RAIL IS BOLTED ONLY AT POSTS 3 AND 5.
- 8). ALL RAIL SECTIONS AND TERMINAL SECTIONS SHALL BE OVERLAPPED IN THE DIRECTION OF TRAVEL.



DELAWARE DEPARTMENT OF TRANSPORTATION



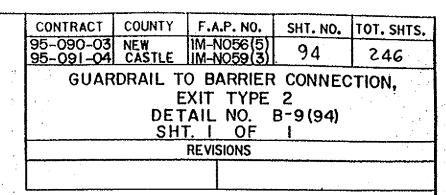
CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHTS.
95-090-03 95-091-04	NEW CASTLE	IM-N056(5) IM-N059(3)	93	246
GUAR	E	O BARRIER XIT TYPE AIL NO. I I. I OF	1	TION,
		REVISIONS		

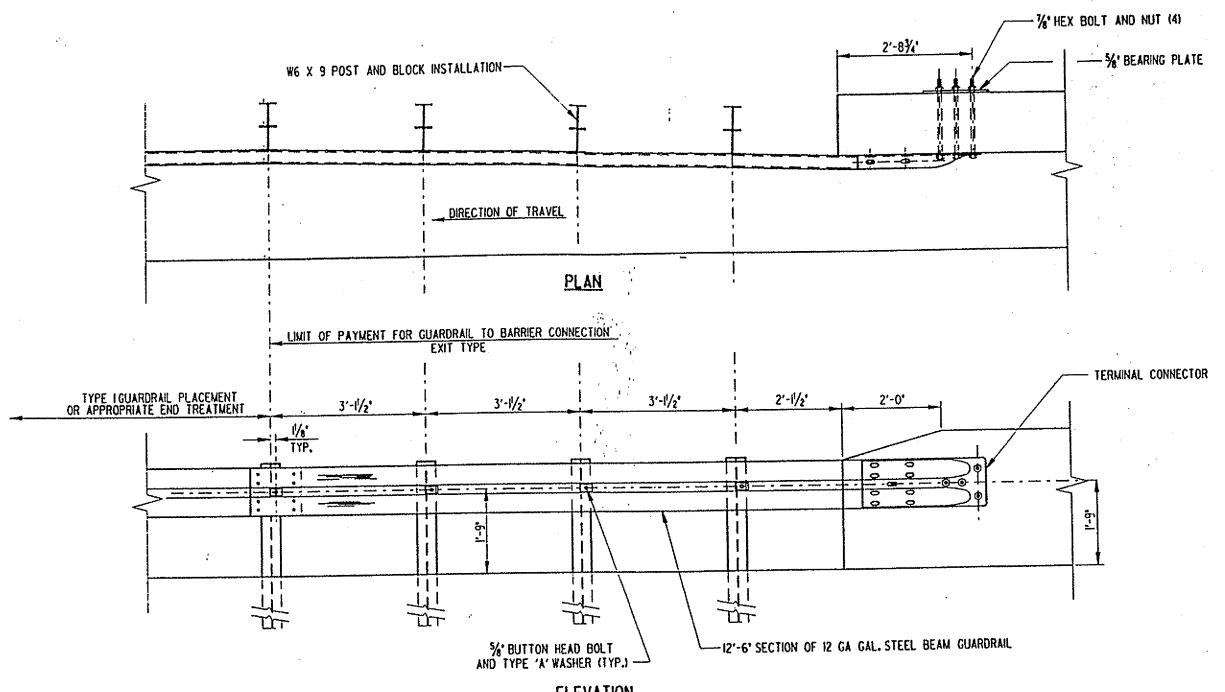


ELEVATION

NOTES: D APPROVED CONCRETE INSERTS MAY BE USED IN NEW CONSTRUCTION TO ATTACH TERMINAL CONNECTOR TO PARAPET.

2) GUARDRAIL SECTION AND TERMINAL CONNECTORS SHALL BE OVERLAPPED IN THE DIRECTION OF TRAVEL. 3) SEE STANDARD SHEETS FOR HARDWARE DETAILS.

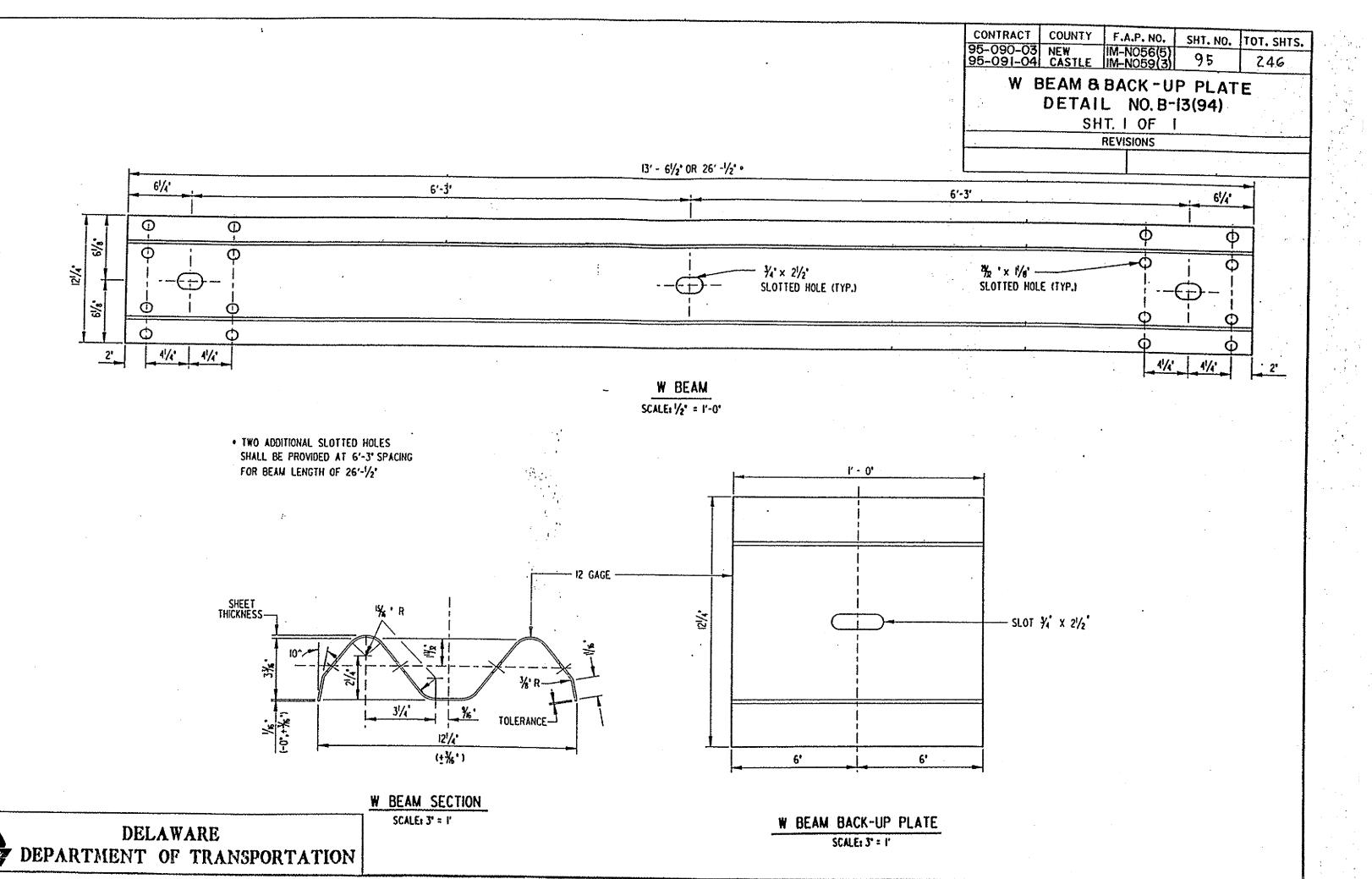


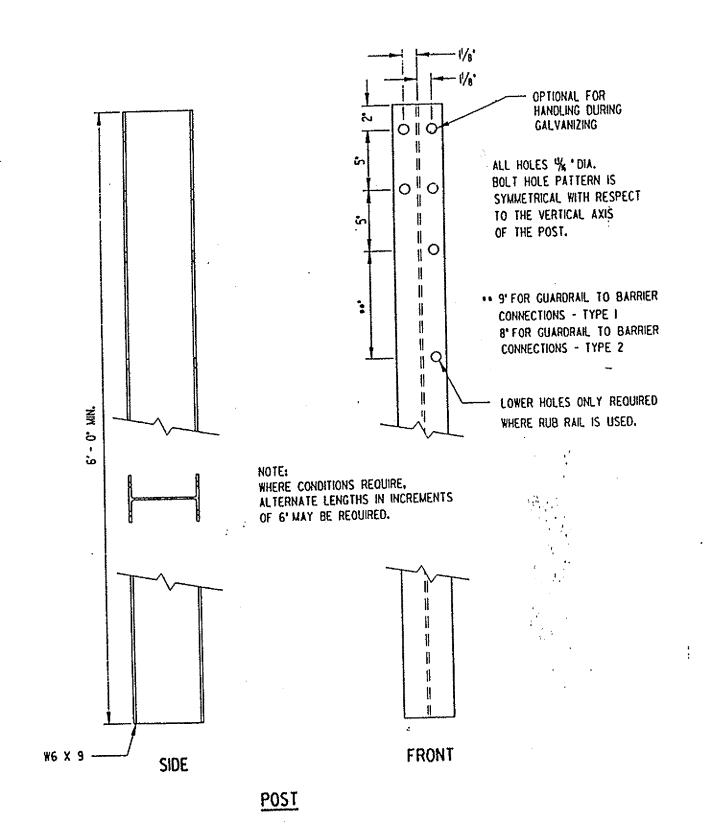


ELEVATION

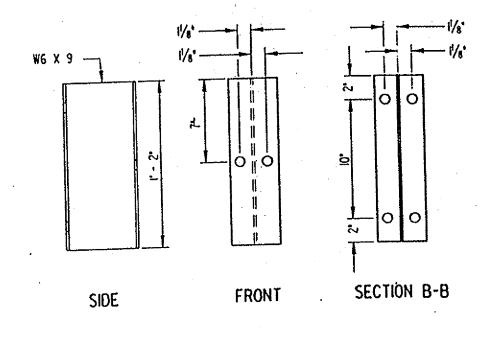
NOTES: II APPROVED CONCRETE INSERTS MAY BE USED IN NEW CONSTRUCTION TO ATTACH TERMINAL CONNECTOR TO PARAPET.

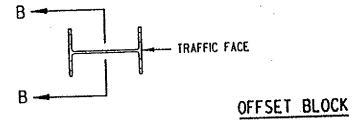
2) GUARDRAIL SECTION AND TERMINAL CONNECTORS SHALL BE OVERLAPPED IN THE DIRECTION OF TRAVEL. 31 SEE STANDARD SHEETS FOR HARDWARE DETAILS.

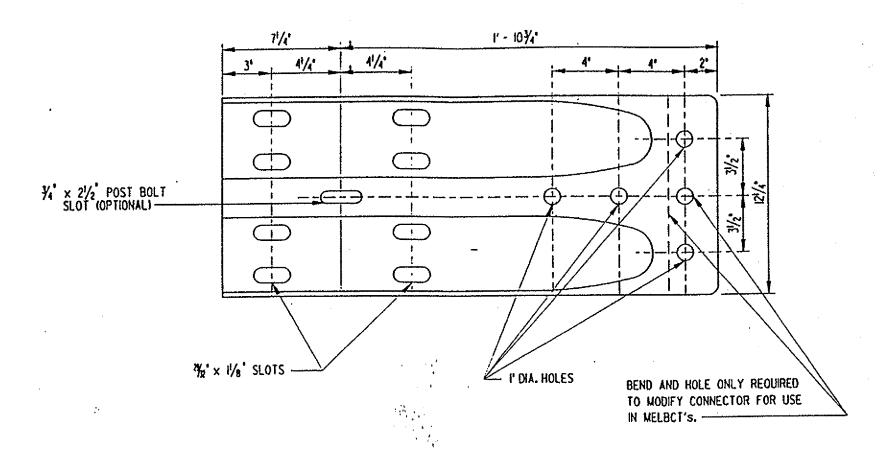


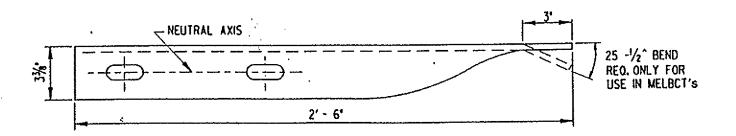


COUNTY CONTRACT F.A.P. NO. SHT. NO. TOT. SHTS. 95-090-03 NEW IM-N056(5) 95-091-04 CASTLE IM-N059(3) 96 246 W BEAM STEEL POST AND OFFSET BLOCK DETAIL NO. B-14(94) SHT. I OF 1. REVISIONS

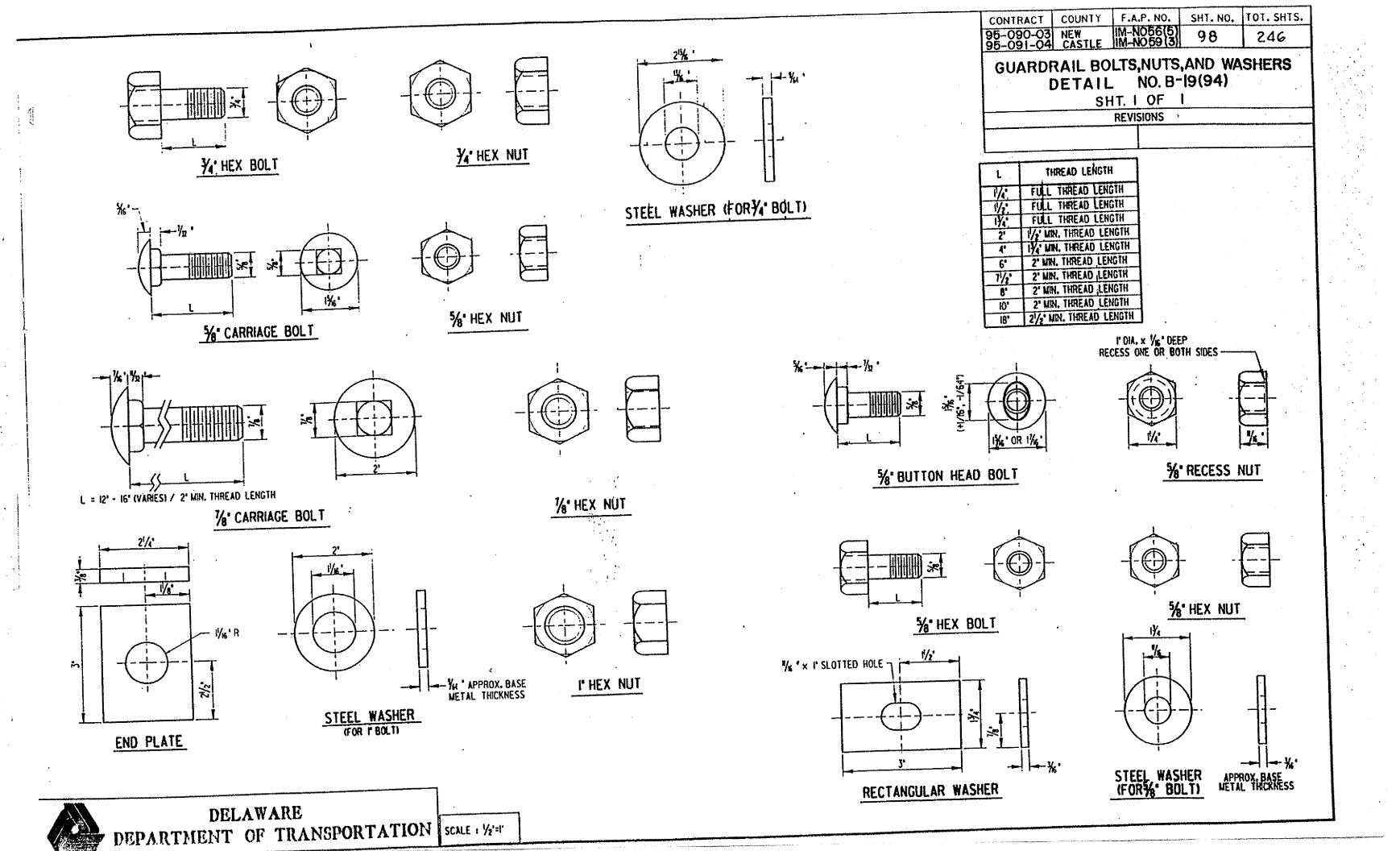








CONTRACT COUNTY 95-090-03 NEW 95-091-04 CASTLE F.A.P. NO. IM-NO56(5) IM-NO59 (3) SHT. NO. TOT. SHTS. 97 246 W BEAM TERMINAL CONNECTOR DETAIL NO. B-15(94) SHT. I OF 1 REVISIONS



GENERAL NOTES

SPECIFICATIONS:

DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED JULY, 1985.

A.A.S.H.T.O. STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DATED 1992 FOR DESIGN INCLUDING ALL INTERIMS.

CONCRETE DESIGN: SERVICE LOAD DESIGN METHOD REINFORCING STEEL DESIGN: fs = 24,000 psi.

LOADING:

HS25-44 LOADING

CONCRETE:

SEE SPECIAL PROVISION.

REINFORCING STEEL:

REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A-615 GRADE 60. MINIMUM COVER FOR BAR SHALL BE 2" UNLESS OTHERWISE NOTED.

ONLY GRADE 60 STEEL CAN BE USED ON THIS PROJECT.

ALL REINFORCING STEEL SHALL BE EPOXY COATED.

EXISTING STRUCTURES:

ALL DIMENSIONS AFFECTED BY GEOMETRICS AND/OR LOCATION OF EXISTING STRUCTURE ARE TO BE CHECKED IN THE FIELD BY THE CONTRACTOR, BEFORE ANY CONSTRUCTION IS DONE, AND BEFORE ANY REINFORCING STEEL ETC., IS ORDERED OR FABRICATED.

WHEREVER POSSIBLE ALL EXPOSED EXISTING REINFORCING STEEL TO BE THOROUGHLY CLEANED, COATED AND INCORPORATED IN FINISHED STRUCTURE.

EPOXY BONDING COMPOUND:

ALL EXISTING CONCRETE THAT WILL BE IN CONTACT WITH NEW CONCRETE AND THE ENTIRE FACE OF CONSTRUCTION JOINTS SHALL BE COATED WITH AN EPOXY BONDING COMPOUND TO CONFORM WITH A. S. T. M. C881.

CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHTS.
95-090-03 95-091-04	NEW CASTLE	IM-N056(5) IM-N059(3)	99	246
		NERAL NOT		
		REVISIONS		
		,		

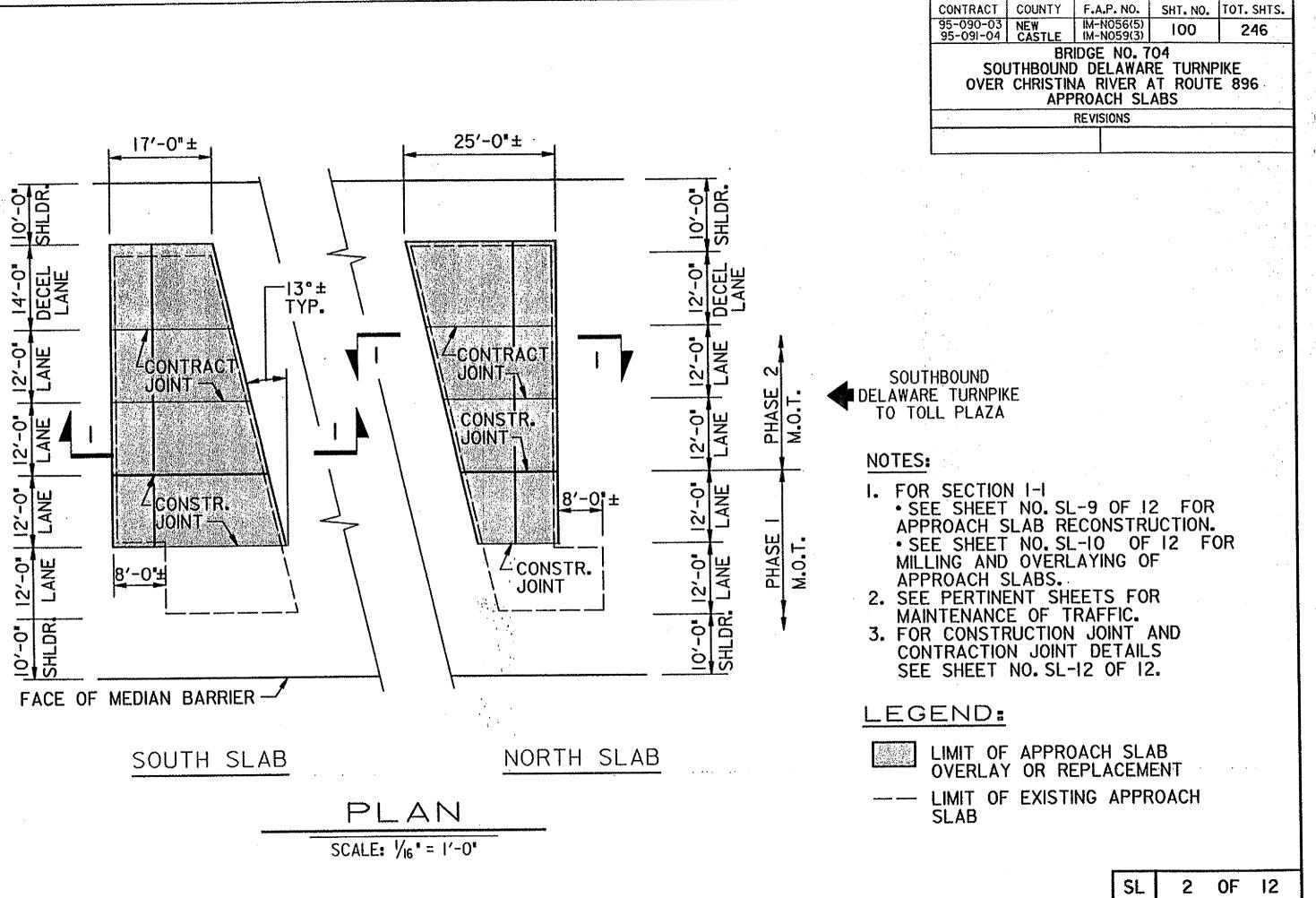
CONSTRUCTION AND CONTRACTION JOINTS:

ALTERNATIVE NO. 1 -- TOTAL REPLACEMENT

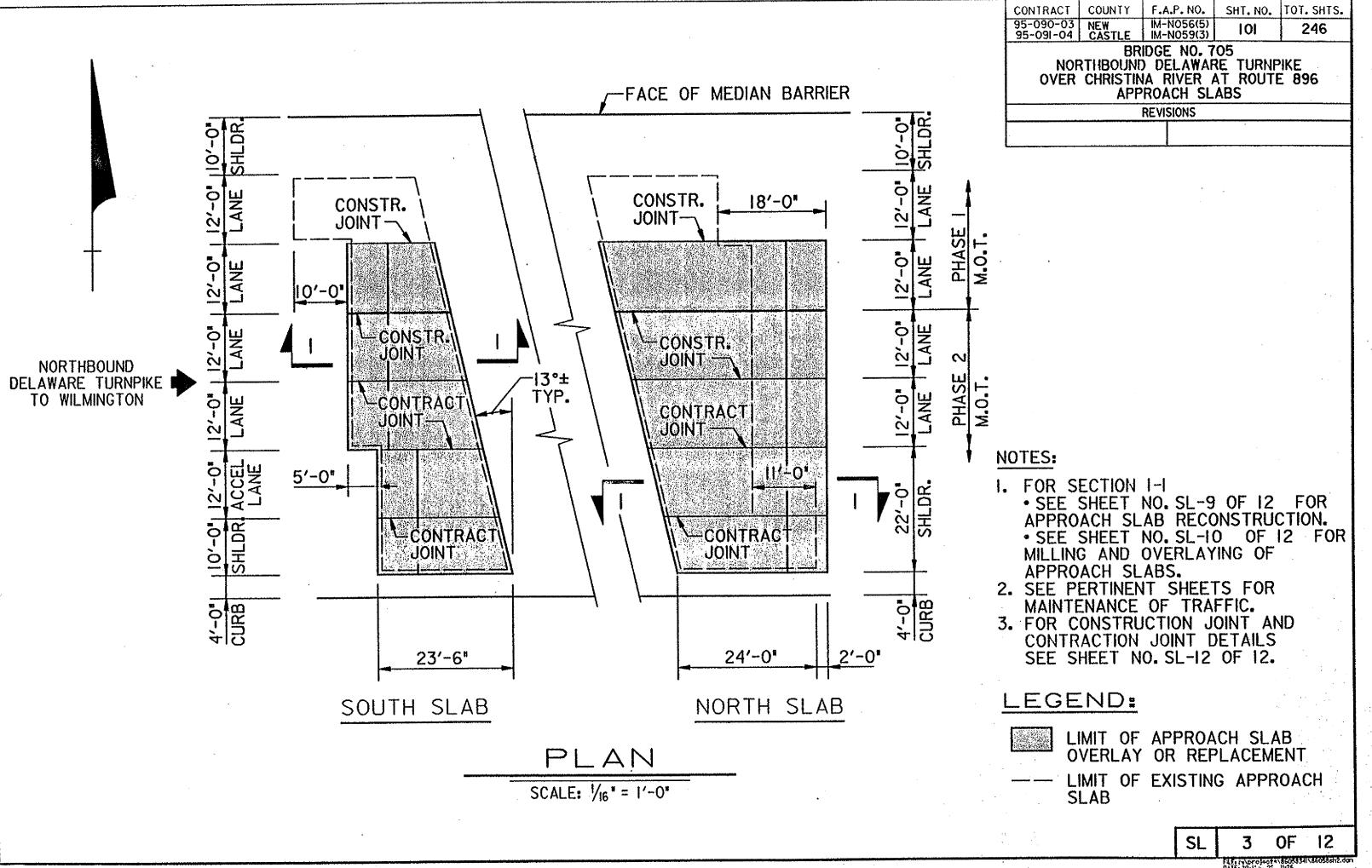
CONSTRUCTION AND CONTRACTION JOINTS SHALL BE SPACED AT THE EXISTING LANE WIDTHS.

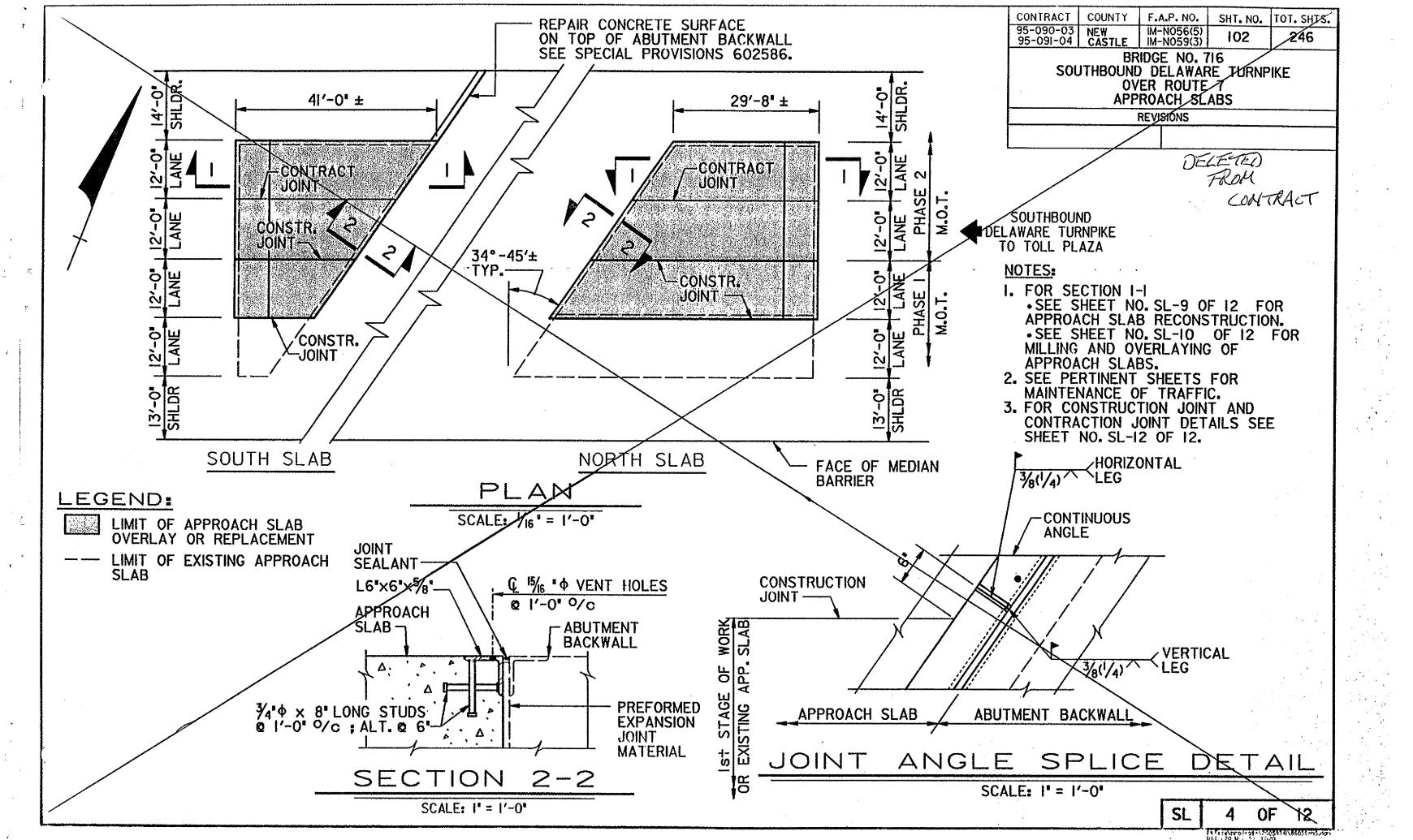
ALTERNATIVE NO. 2 - MILL 10' AND OVERLAY.

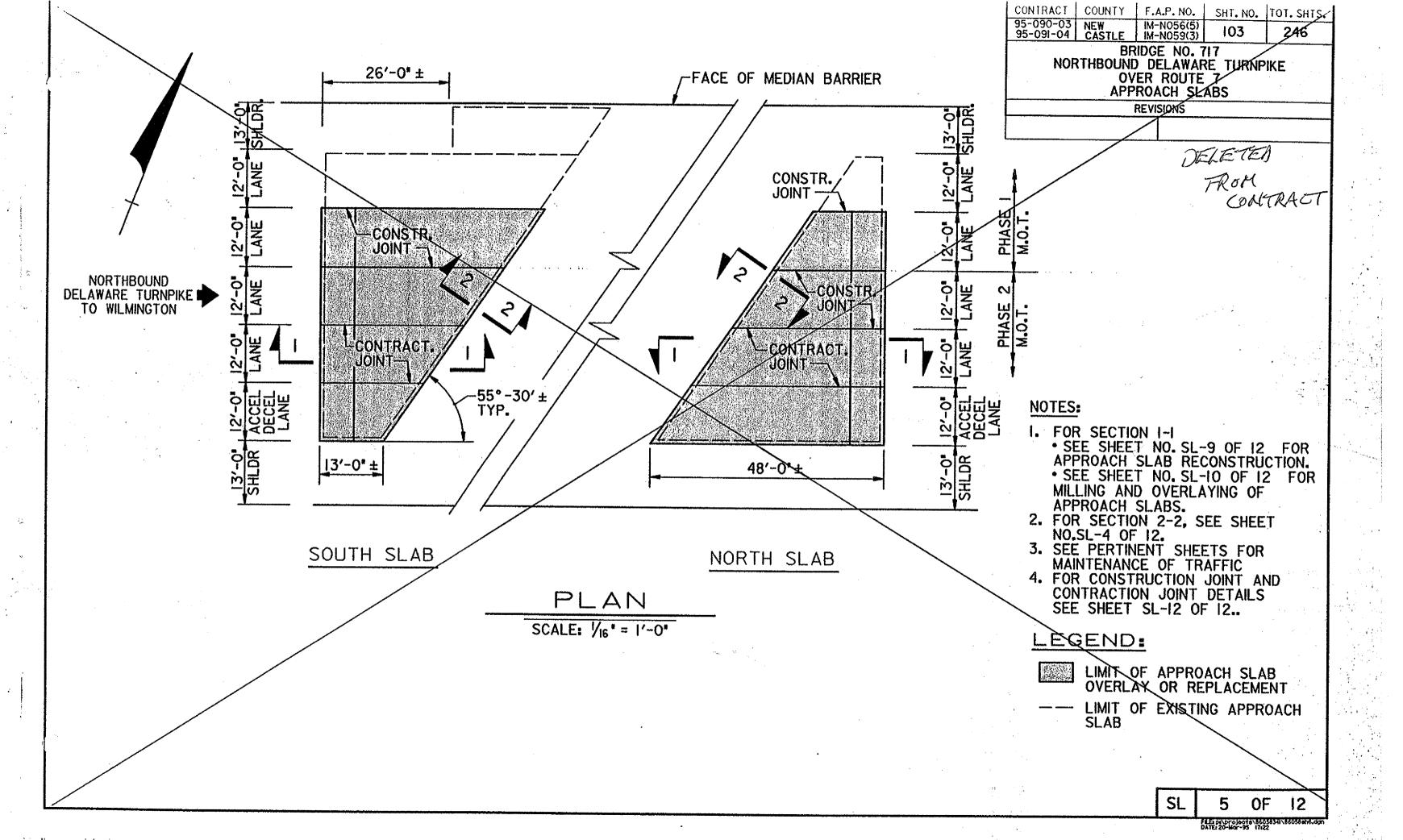
CONSTRUCTION AND CONTRACTION JOINTS SHALL COINCIDED WITH THE JOINTS IN THE EXISTING APPROACH SLAB ON WHICH THE OVERLAY IS PLACED.

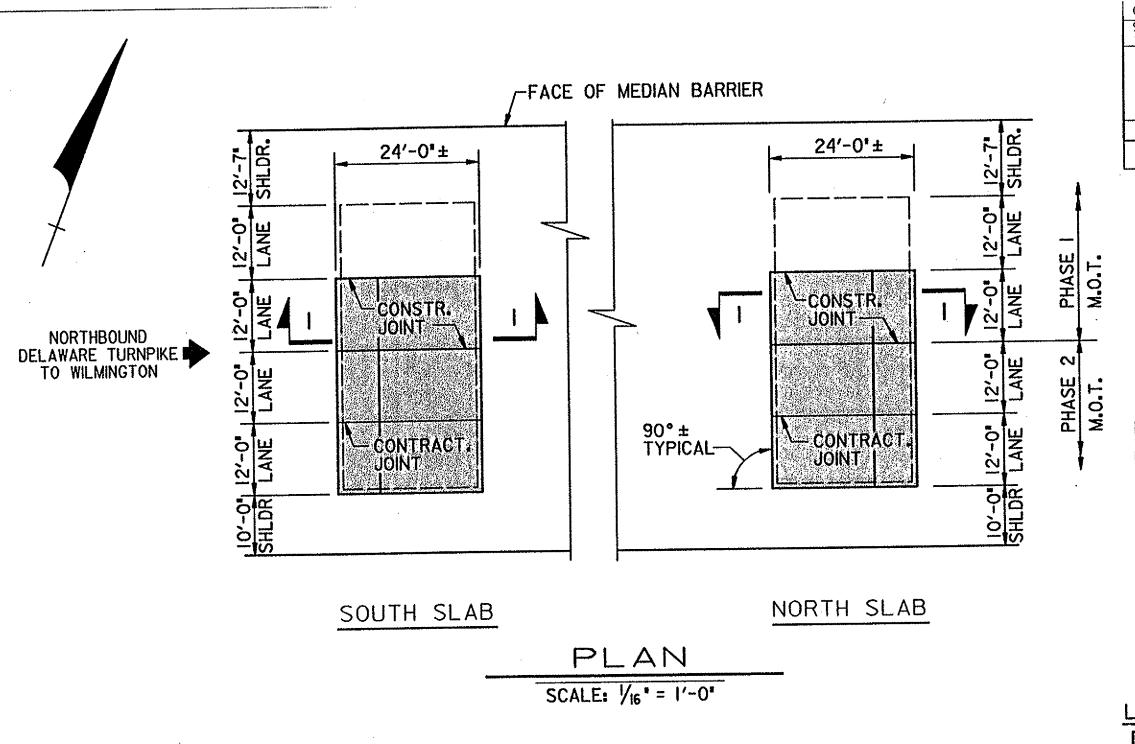


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CONTRACT COUNTY L.A.L.:
95-090-03 NEW IM-N056
95-091-04 CASTLE IM-N059 SHI. NO. 101. SHIS. IM-N056(5) IM-N059(3) 104 246 BRIDGE NO. 719
NORTHBOUND DELAWARE TURNPIKE
OVER CHRISTINA RIVER APPROACH SLABS REVISIONS

NOTES:

- I. FOR SECTION I-I

 SEE SHEET NO. SL-9 OF 12 FOR APPROACH SLAB RECONSTRUCTION.

 SEE SHEET NO. SL-10 OF 12 FOR MILLING AND OVERLAYING OF APPROACH SLABS.

 2. SEE PERTINENT SHEETS FOR MAINTENANCE OF TRAFFIC.

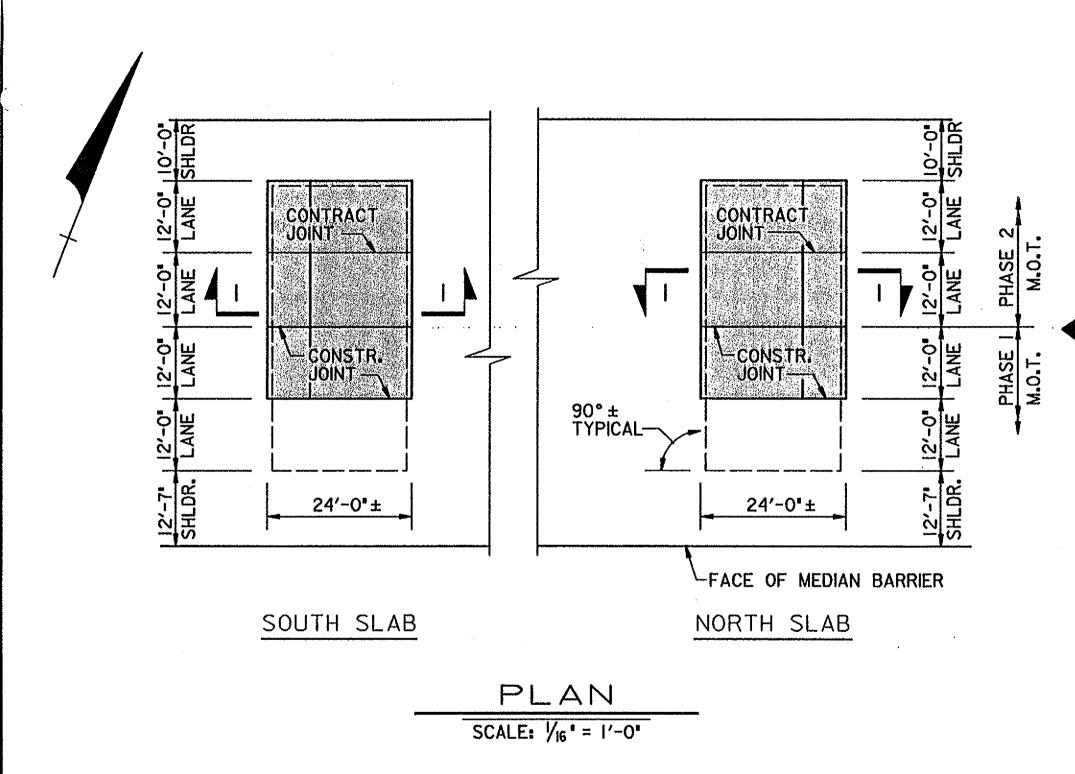
 3. FOR CONSTRUCTION JOINT AND CONTRACTION JOINT DETAILS SEE SHEET SHEET NO. SL-12 OF 12.

LEGEND:

LIMIT OF APPROACH SLAB OVERLAY OR REPLACEMENT

LIMIT OF EXISTING APPROACH SLAB

6



CONTRACT COUNTY F.A.P. NO. SHI. NO. 101. SHIS. 95-090-03 NEW IM-N056(5) 105 246 BRIDGE NO. 720 SOUTHBOUND DELAWARE TURNPIKE OVER CHRISTINA RIVER APPROACH SLABS REVISIONS

SOUTHBOUND DELAWARE TURNPIKE TO TOLL PLAZA

NOTES:

- I. FOR SECTION 1-I

 SEE SHEET NO. SL-9 OF 12 FOR
 APPROACH SLAB RECONSTRUCTION.

 SEE SHEET NO. SL-10 OF 12 FOR
 MILLING AND OVERLAYING OF
 APPROACH SLABS.

 2. SEE PERTINGINT SHEETS FOR
 MAINTENANCE OF TRAFFIC.

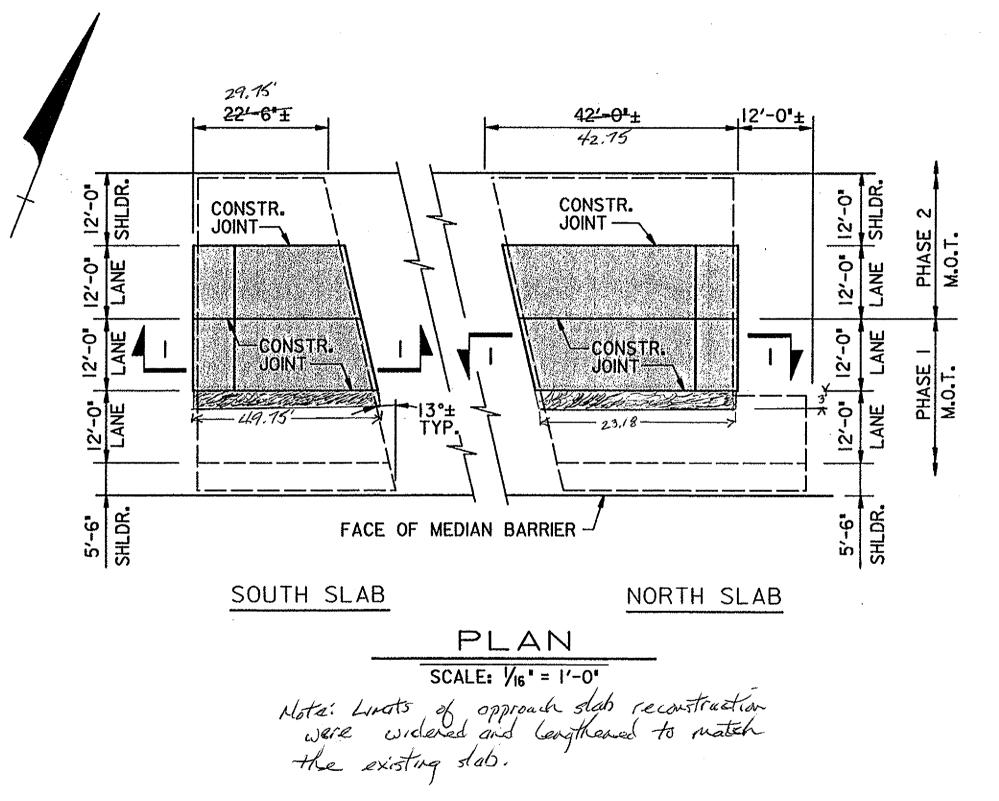
 3. FOR CONSTRUCTION JOINT AND
 CONTRACTION JOINT DETAILS
 SEE SHEET NO. SL-12 OF 12.

LEGEND:

LIMIT OF APPROACH SLAB OVERLAY OR REPLACEMENT

LIMIT OF EXISTING APPROACH SLAB

OF



CONTRACT COUNTY F.A.P. NO. SHT. NO. TOT. SHTS. 95-090-03 95-091-04 IM-N056(5) IM-N059(3) NEW CASTLE 106 246 BRIDGE NO. 744 SOUTHBOUND DELAWARE TURNPIKE OVER CHRISTINA RIVER APPROACH SLABS REVISIONS

SOUTHBOUND DELAWARE TURNPIKE TO TOLL PLAZA

NOTES:

- I. FOR SECTION 1-I

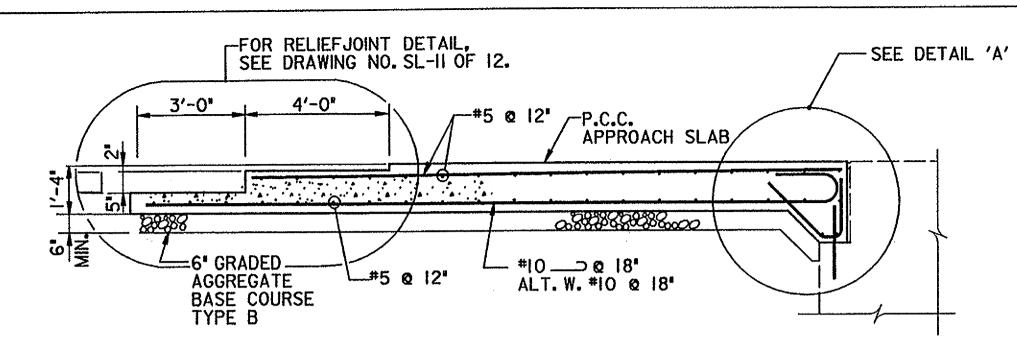
 SEE SHEET NO. SL-9 OF 12 FOR APPROACH SLAB RECONSTRUCTION.
 SEE SHEET NO. SL-10 OF 12 FOR MILLING AND OVERLAYING OF APPROACH SLABS.

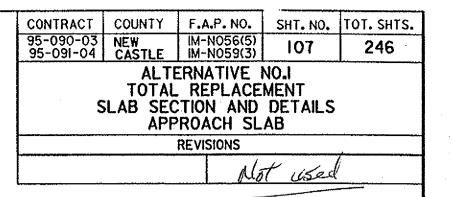
 2. SEE PERTINENT SHEETS FOR MAINTENANCE OF TRAFFIC.
 3. FOR CONSTRUCTION JOINT AND CONTRACTION JOINT DETAILS SEE SHEET NO. SL-12 OF 12.

LEGEND:

LIMIT OF APPROACH SLAB OVERLAY OR REPLACEMENT

LIMIT OF EXISTING APPROACH SLAB

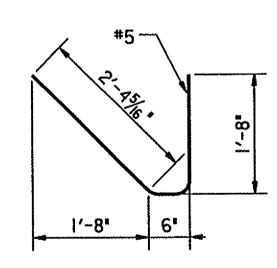




NOTES:

- 1. CONTRACTOR SHALL ANTICIPATE PERFORMING REMEDIAL REPAIRS TO THE ABUTMENT BACKWALL IN THE AREA WHERE THE APPROACH SLAB IS TO BEAR.

 2. THE TOP OF THE JOINT SEALING MATERIAL SHALL NOT BE LESS THAN 1/16" NOT MORE THAN 3/16" BELOW THE SURFACE OF THE PAVEMENT.

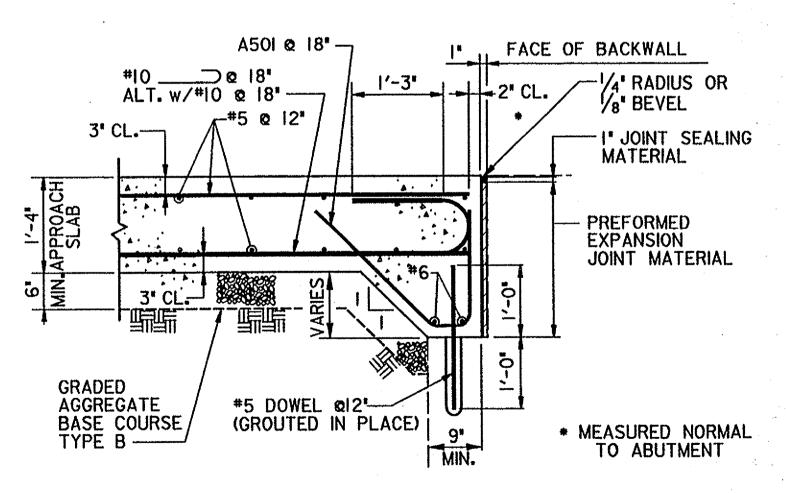


SECTION

SCALE:3/8" = 1'-0"

DETAIL BEND BAR

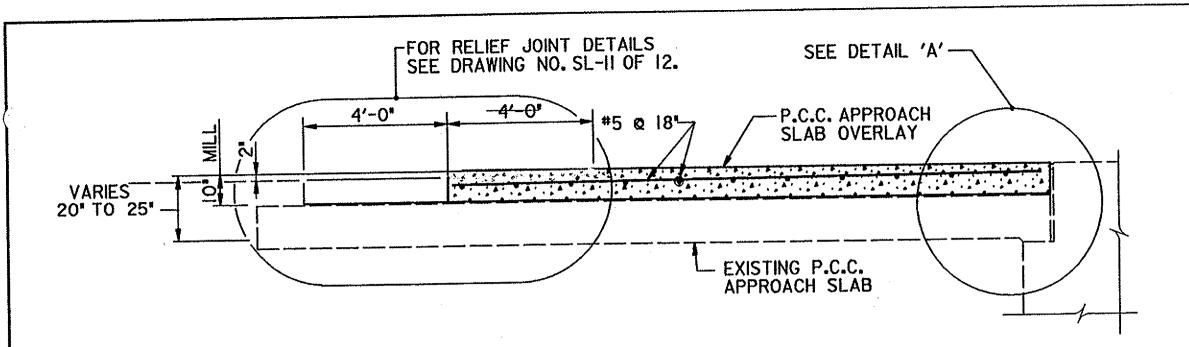
> MK A50I SCALE:3/4" = 1'-0"





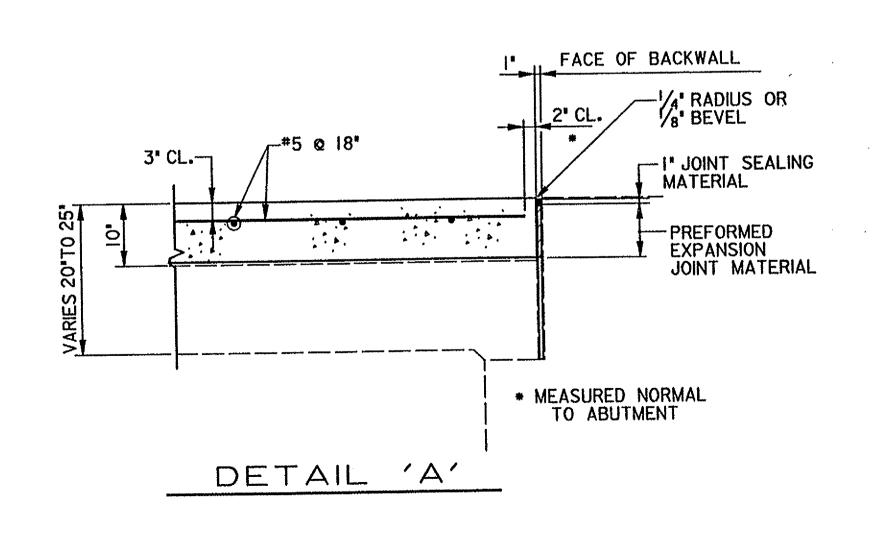
SL 9 OF

ALE ps/projects/88558541/886585h3.dgn DATE: 20-Mar-95 III44



SHT. NO. TOT. SHTS. COUNTY F.A.P. NO. CONTRACT 95-090-03 NEW IM-N056(5) 95-091-04 CASTLE IM-N059(3) 108 246 ALTERNATIVE NO.2 MILL IO' AND OVERLAY SLAB SECTION AND DETAILS
APPROACH SLAB REVISIONS

SECTION SCALE:3/8" = 1'-0"

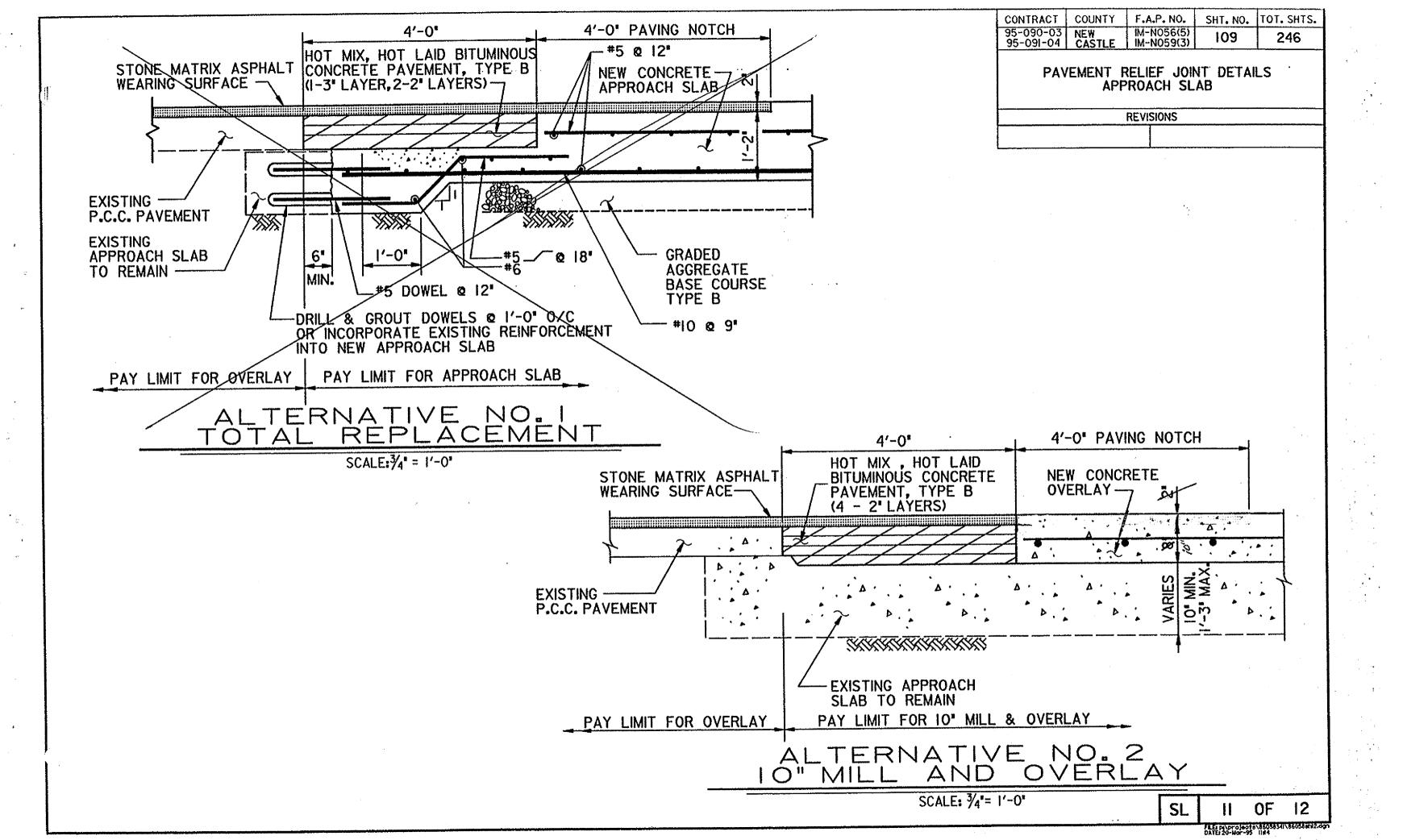


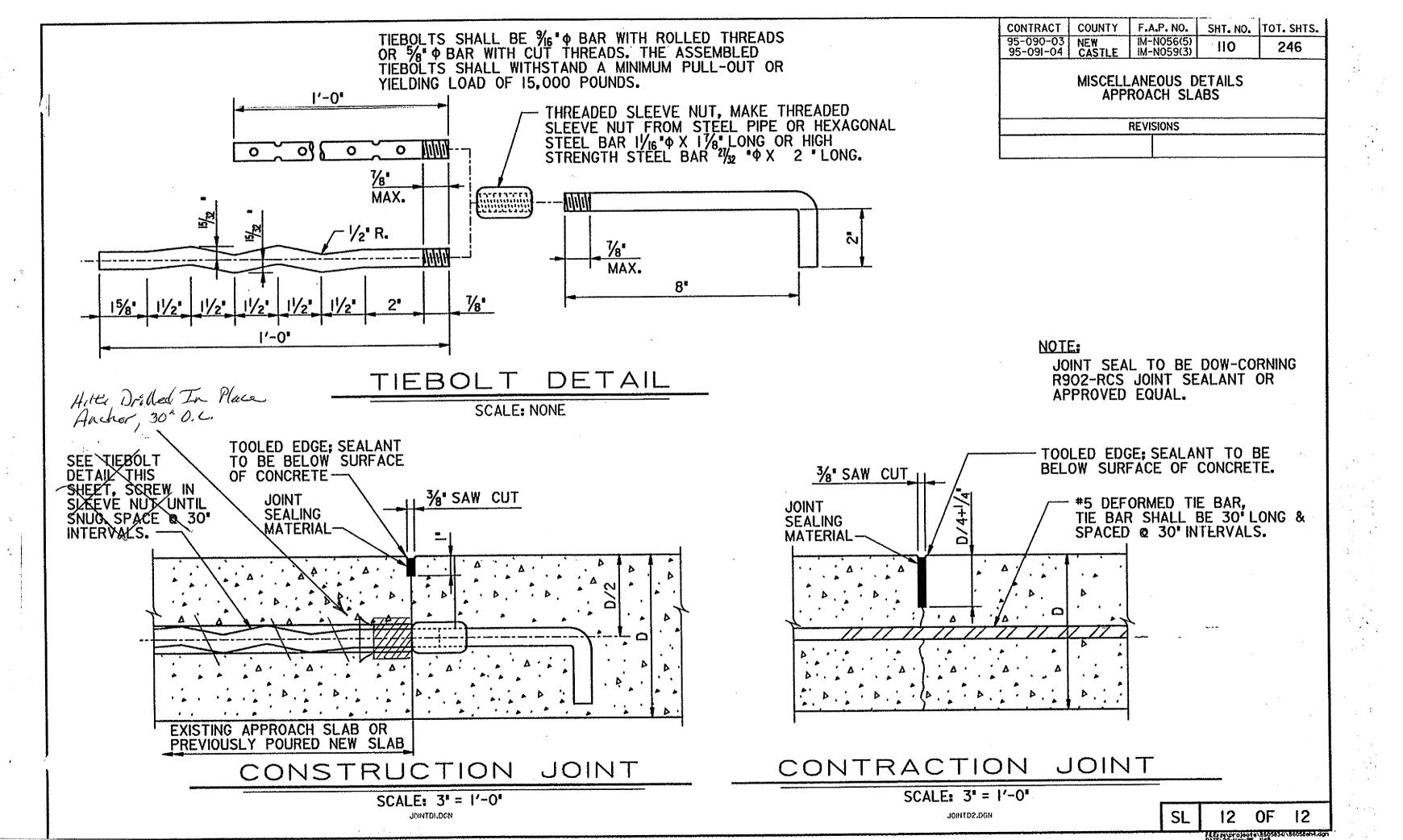
NOTES:

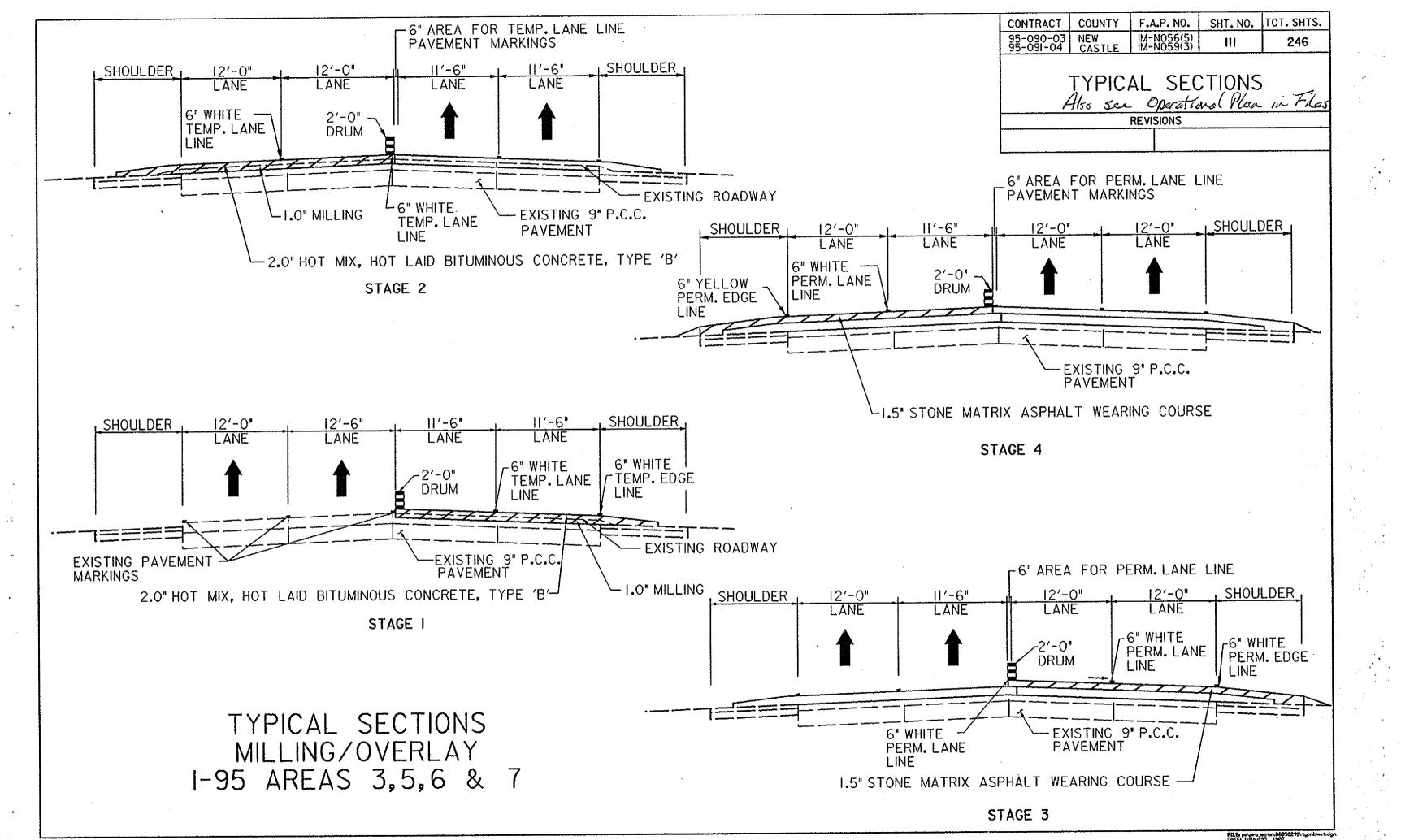
- CONTRACTOR SHALL ANTICIPATE PERFORMING REMEDIAL REPAIRS TO THE ABUTMENT IN THE AREA
- WHERE THE CONCRETE OVERLAY COMES IN CONTACT WITH THE BACKWALL.

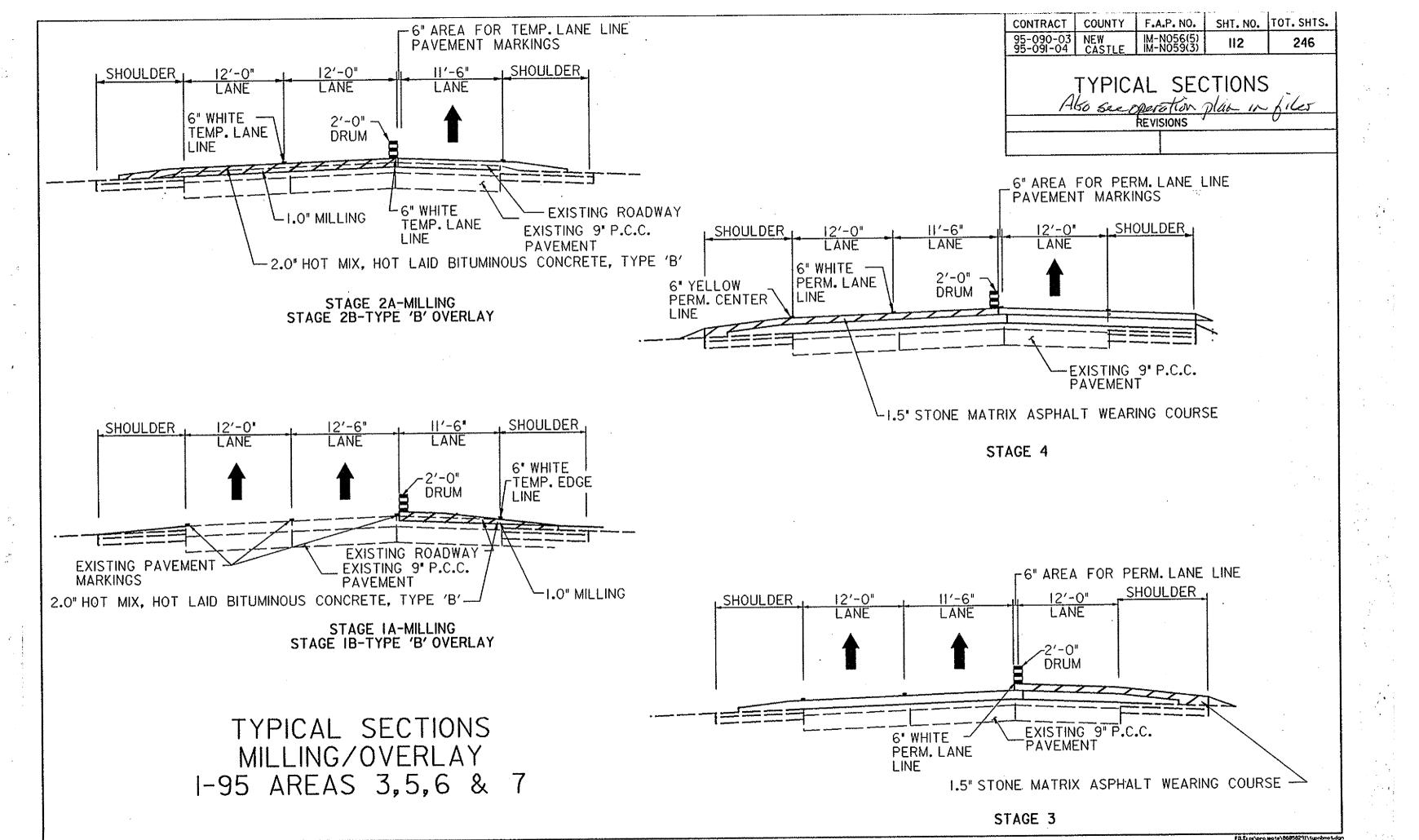
 2. THE TOP OF THE JOINT SEALING MATERIAL SHALL NOT BE LESS THAN 1/16" NOT MORE THAN 3/16" BELOW THE SURFACE OF THE PAVEMENT.

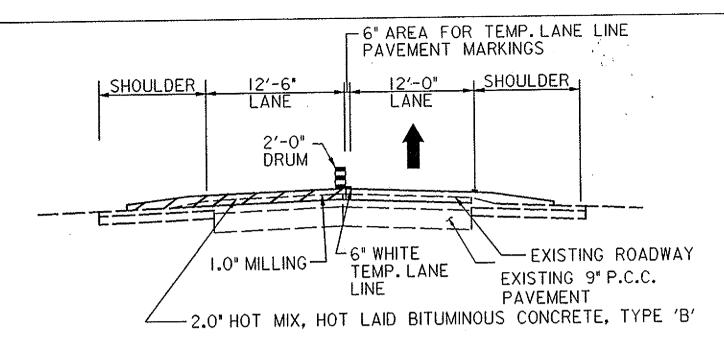
OF 10



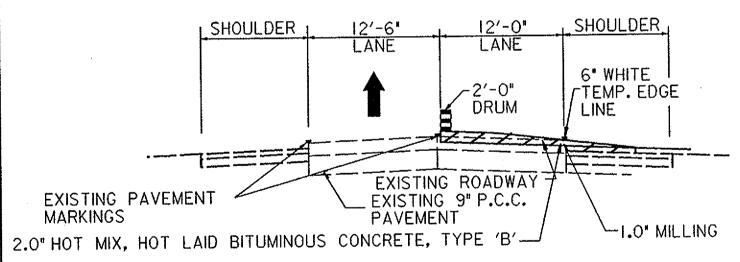






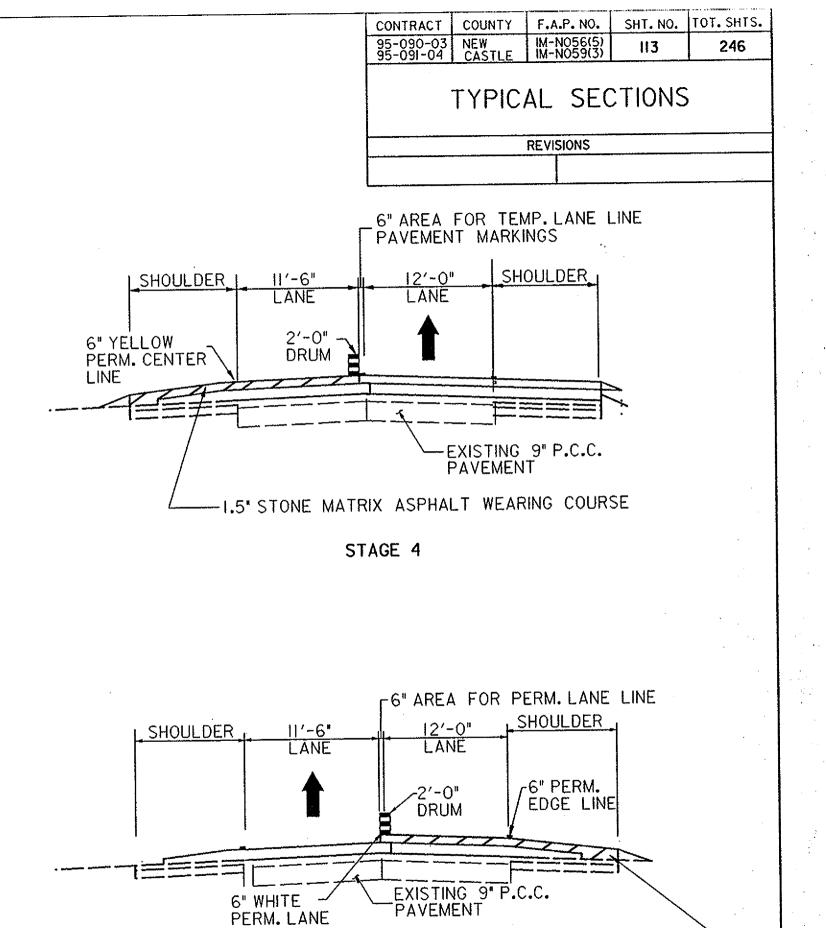


STAGE 2A-MILLING STAGE 2B-TYPE 'B' OVERLAY



STAGE IA-MILLING STAGE IB-TYPE 'B' OVERLAY

TYPICAL SECTIONS
MILLING/OVERLAY
1-95 AREAS 3,5,6 & 7

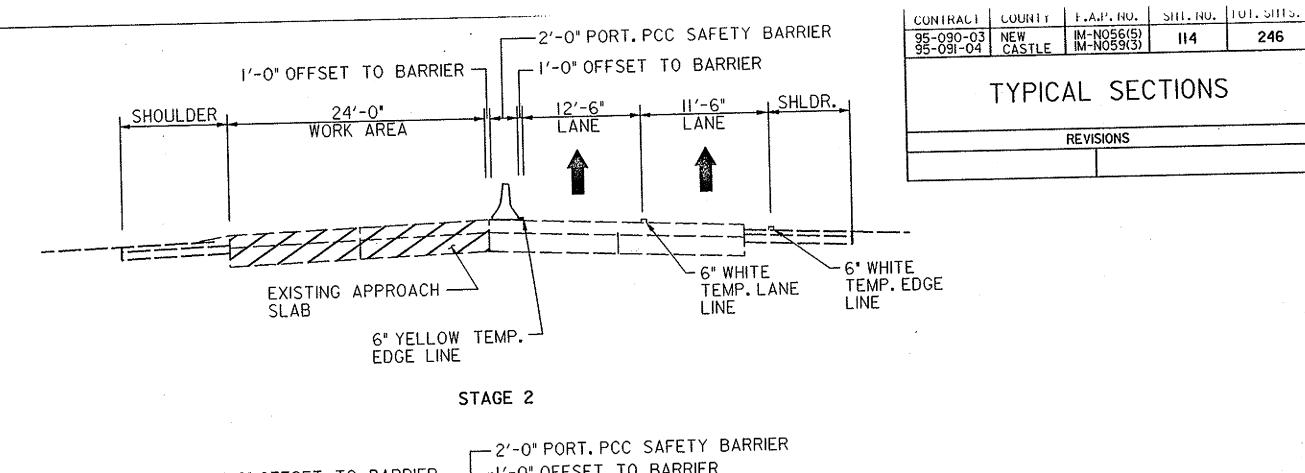


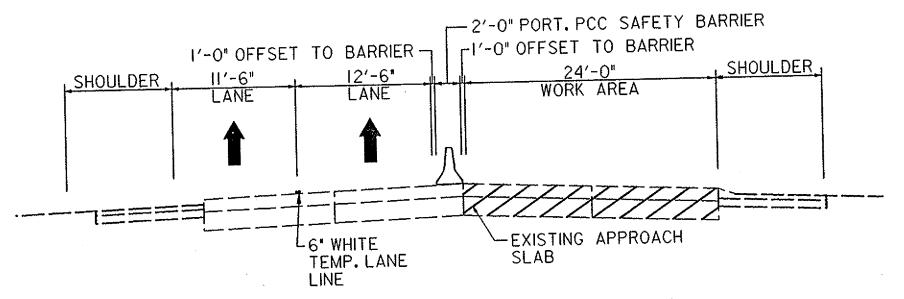
1.5" STONE MATRIX ASPHALT WEARING COURSE -

FILE: ps\projecte\86858291\typr DATE: 1-Hoy-95 11:07

STAGE 3

LINE





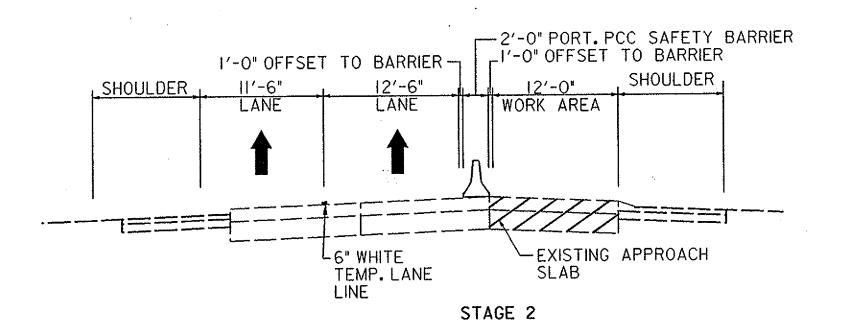
STAGE I

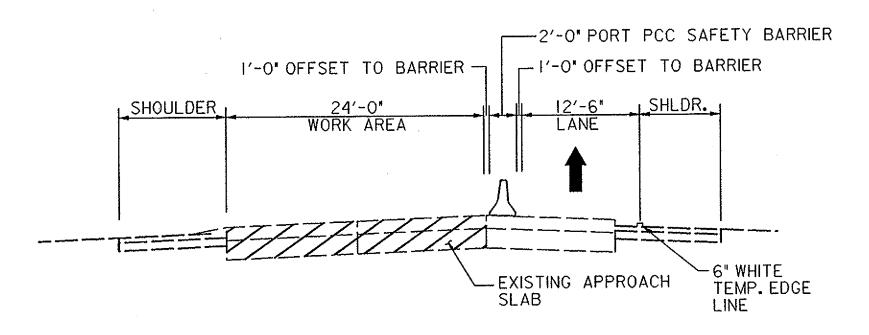
CONTRACTOR TO STRIPE NOTE: 200' TRANSITION ONTO SHOULDER WITH TEMPORARY PAINT ON ROADWAY AND MAINTAIN LANES ON BRIDGE WITH TEMPORARY TAPE.

TYPICAL SECTIONS BRIDGE APPROACH SLAB REPAIR 1-95 AREAS 2-7

PRE pe projecte 3603821 DATE: 1-Hey-95 1007

246





STAGE I

-	TYPICAL	SE	CT	IONS		
BRIDGE	APPRO/	4CH	SI	_AB	REPAIR	7
	1-95	ARE	Α	8		

-090-03 -091-04	IM-NO59(3) M-NO59(3) Al SE(II5	246
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	AL SE	2 HONS	•
	REVISIONS		
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NOTE: CONTRACTOR TO STRIPE 200' TRANSITION ONTO SHOULDER WITH TEMPORARY PAINT ON ROADWAY AND MAINTAIN LANES ON BRIDGE WITH TEMPORARY TAPE.

	~~~						
CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHTS.			
95-090-03 95-091-04	NEW CASTLE	IM-N056(5) IM-N059(3)	116	246			
MAINTENANCE OF TRAFFIC DETAILS  REVISIONS							

## LEGEND

● PLASTIC DRUMS ○ ARROW PANEL

TEMPORARY TRAFFIC SIGN

DIRECTION OF TRAFFIC

LIMITS OF RESURFACING

DEX TRUCK MOUNTED ATTENUATOR

PORTABLE LIGHT ASSEMBLY

MESSAGE BOARD

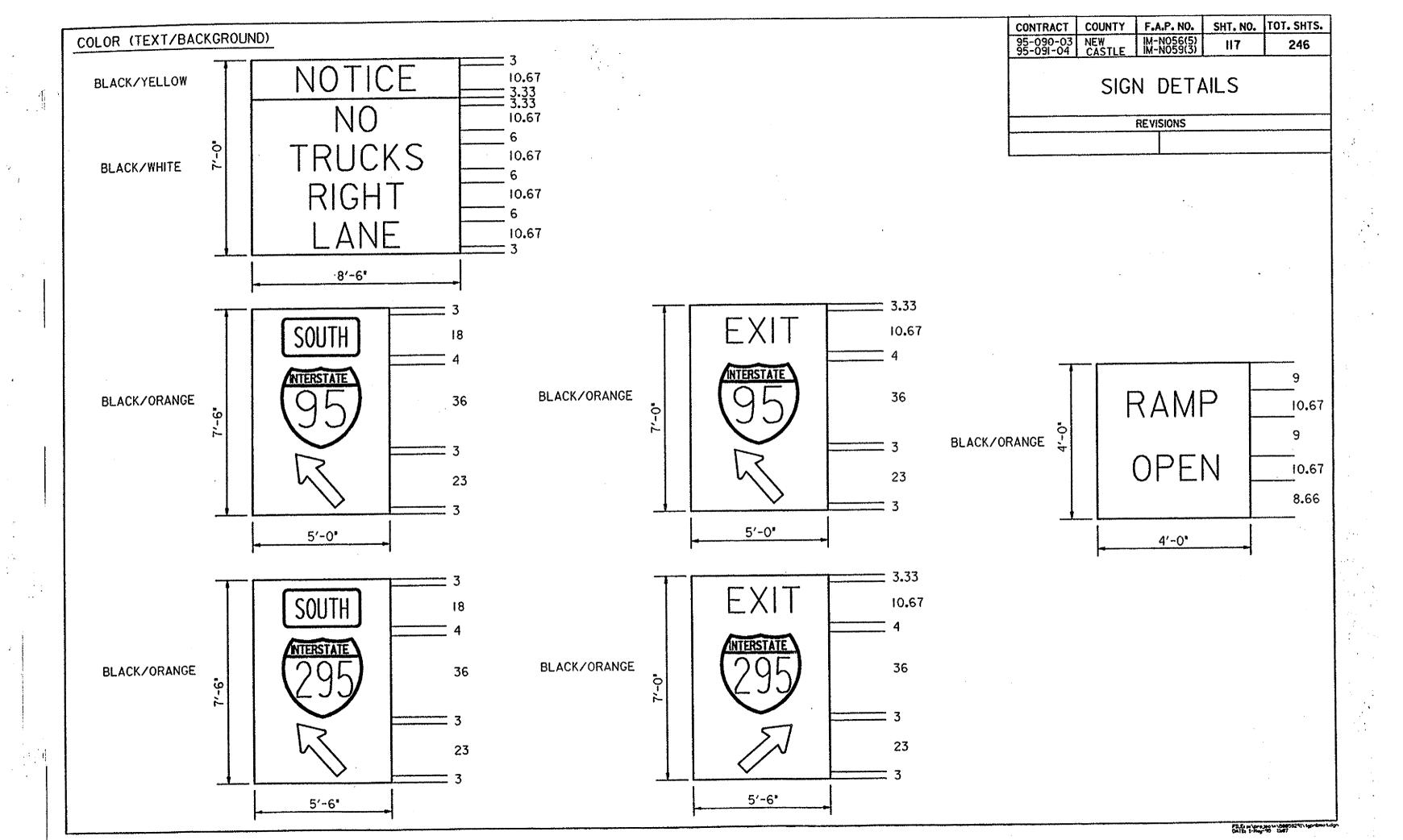
CRASH CUSHION (55 MPH)

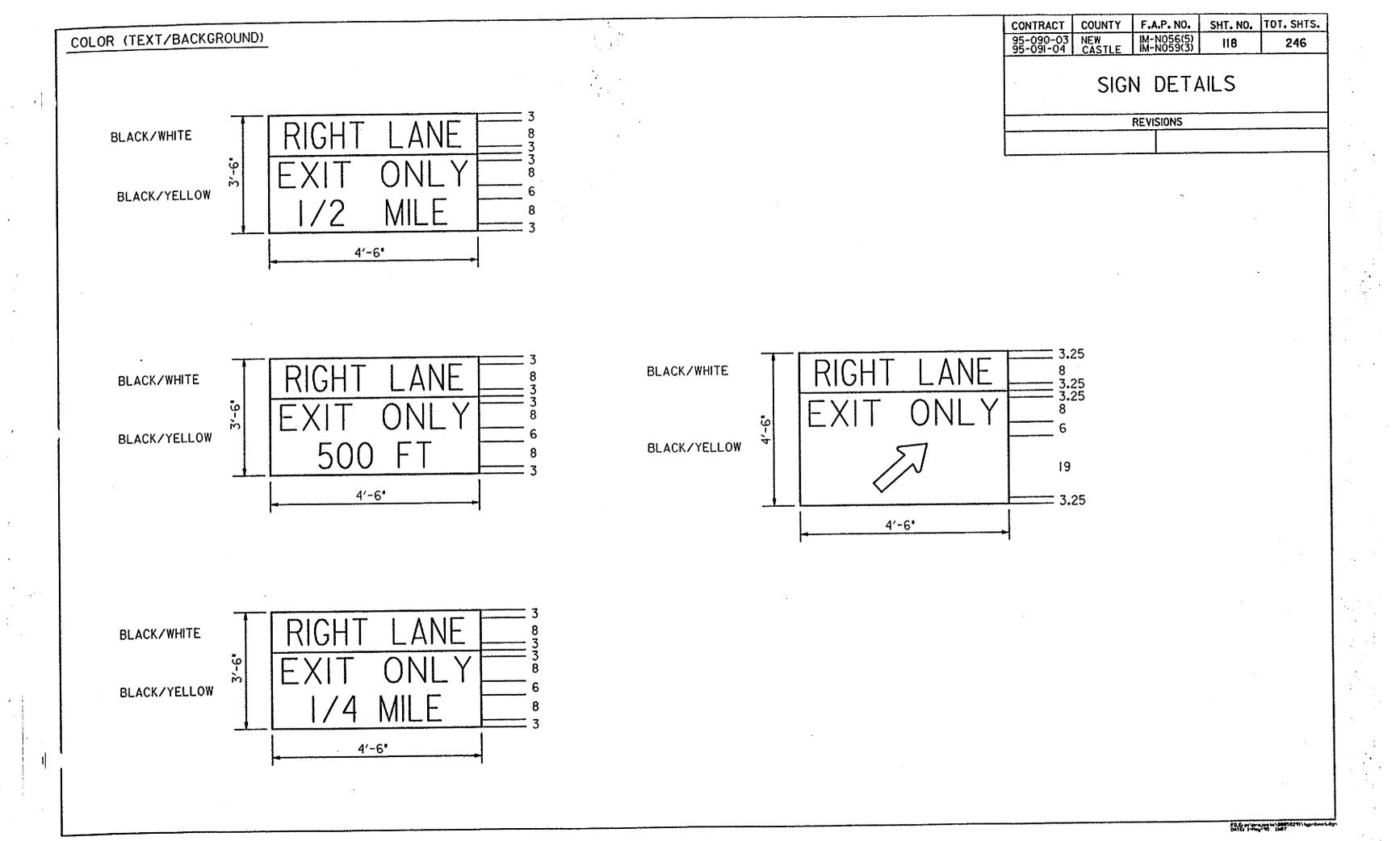


55 M.P.H. CRASH CUSHION

CONTRACTORS NOTE THAT 2" DROP-OFF POLICY WILL BE STRICTLY ENFORCED BY DELDOT AS NOTED IN THE SPECIFICATIONS.

FREE ps\projects\860582



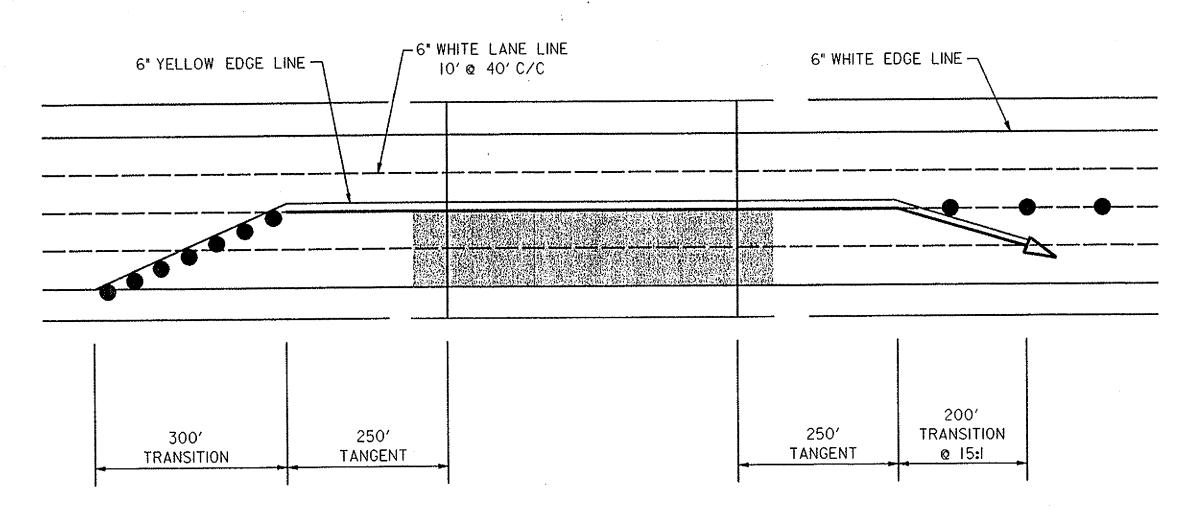


CONTRACT COUNTY F.A.P. NO. SHT. NO. TOT. SHTS.

95-090-03 NEW IM-N056(5) II9 246

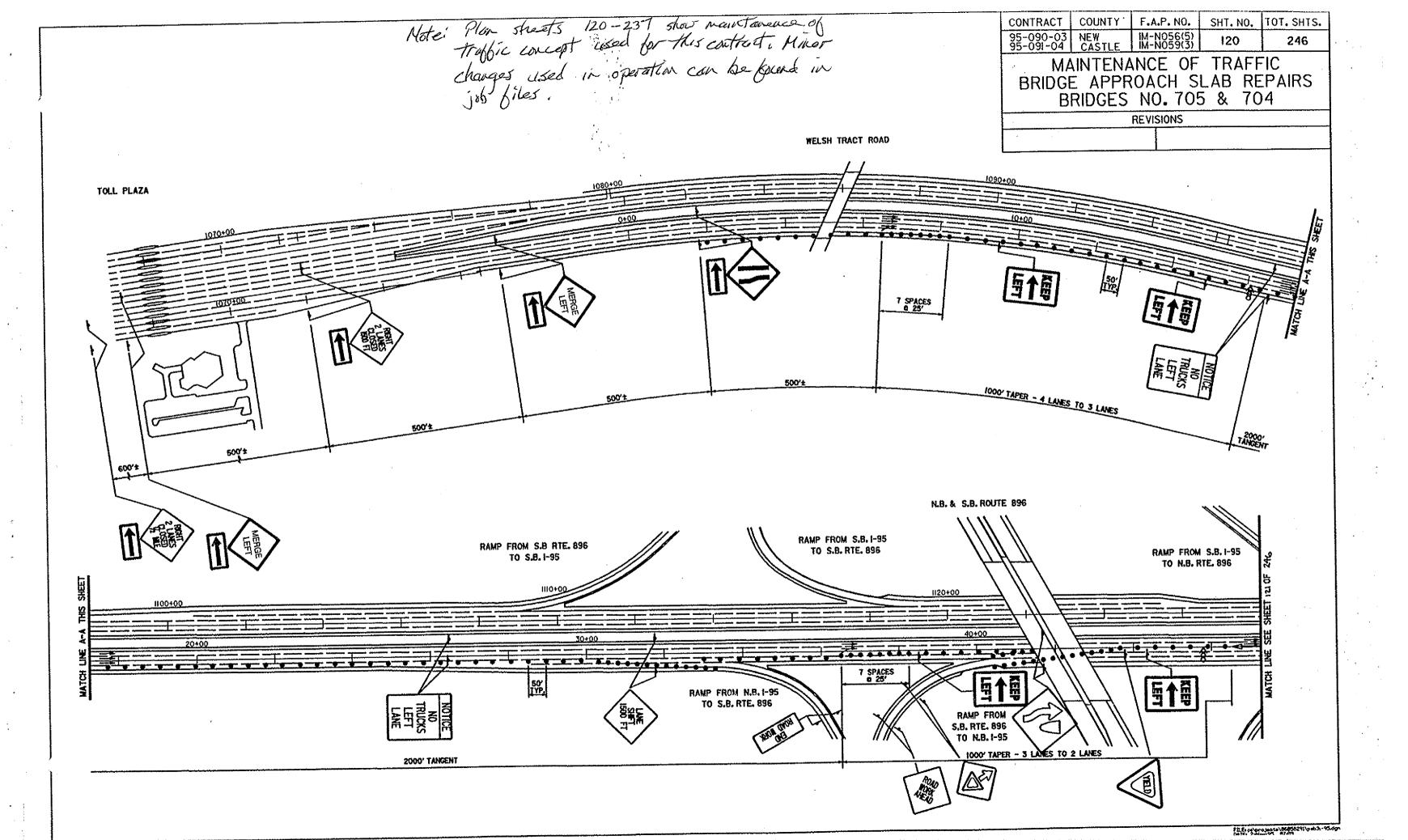
PLACEMENT OF TEMPORARY
PAVEMENT MARKINGS

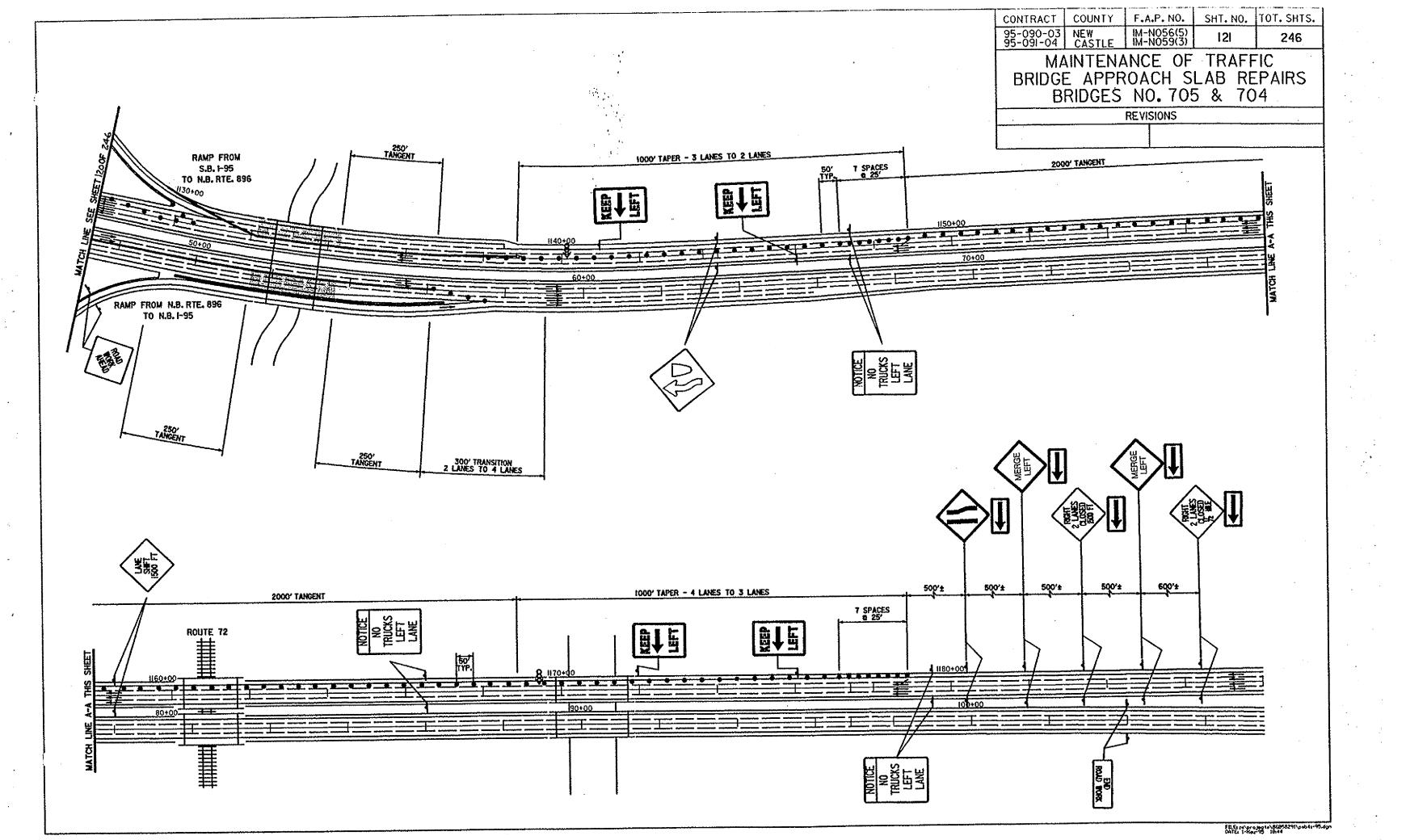
REVISIONS

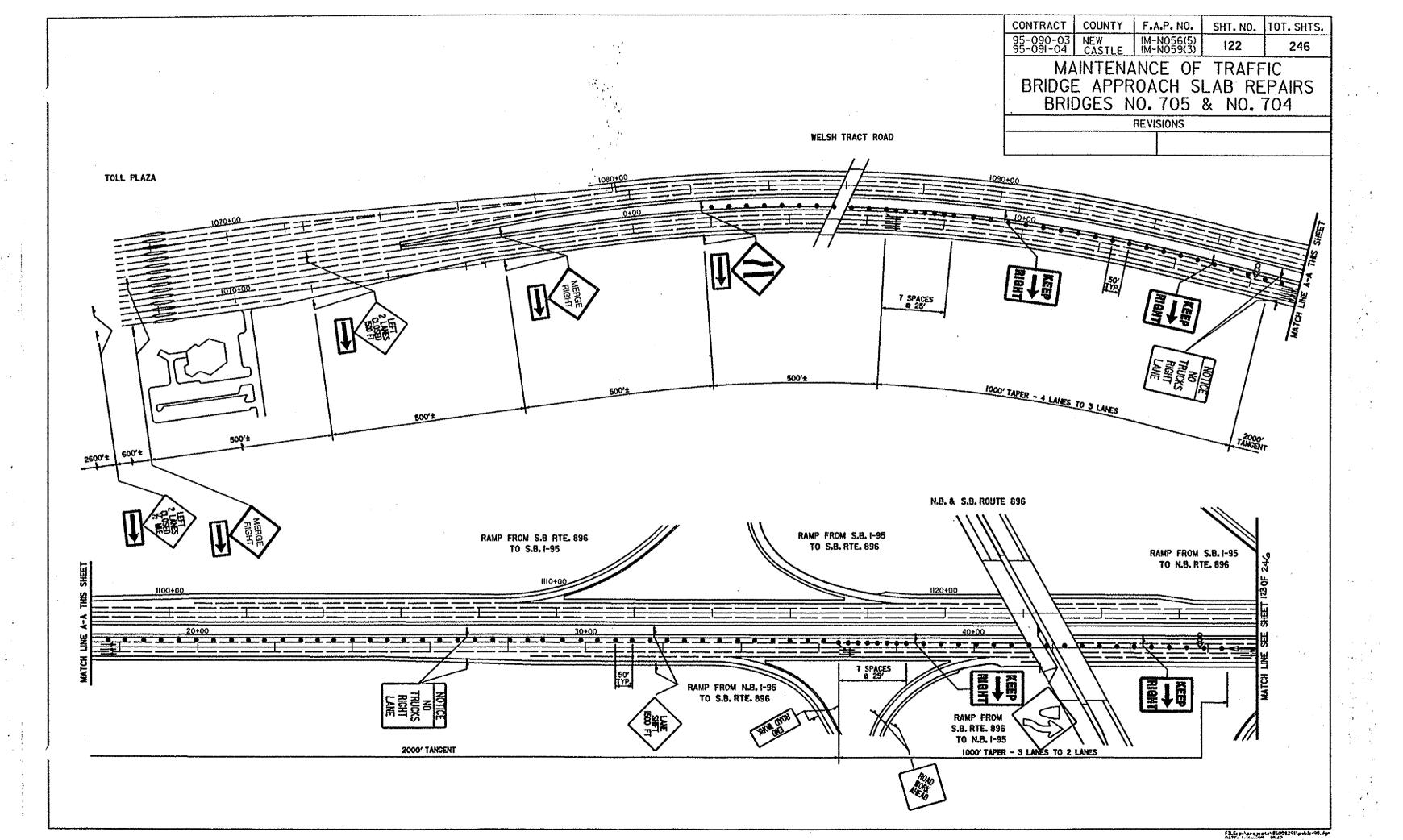


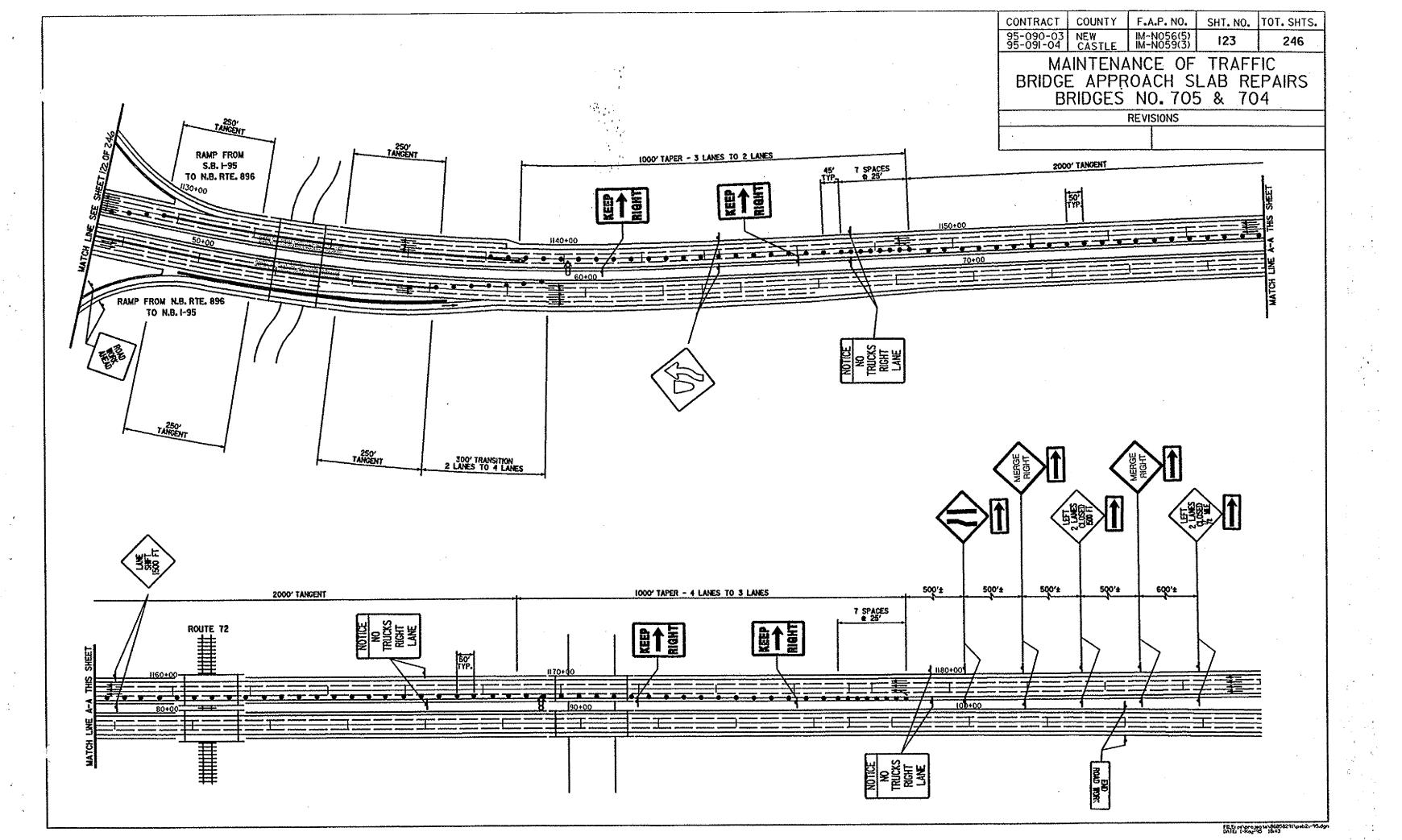
## PLACEMENT OF TEMPORARY PAVEMENT MARKINGS

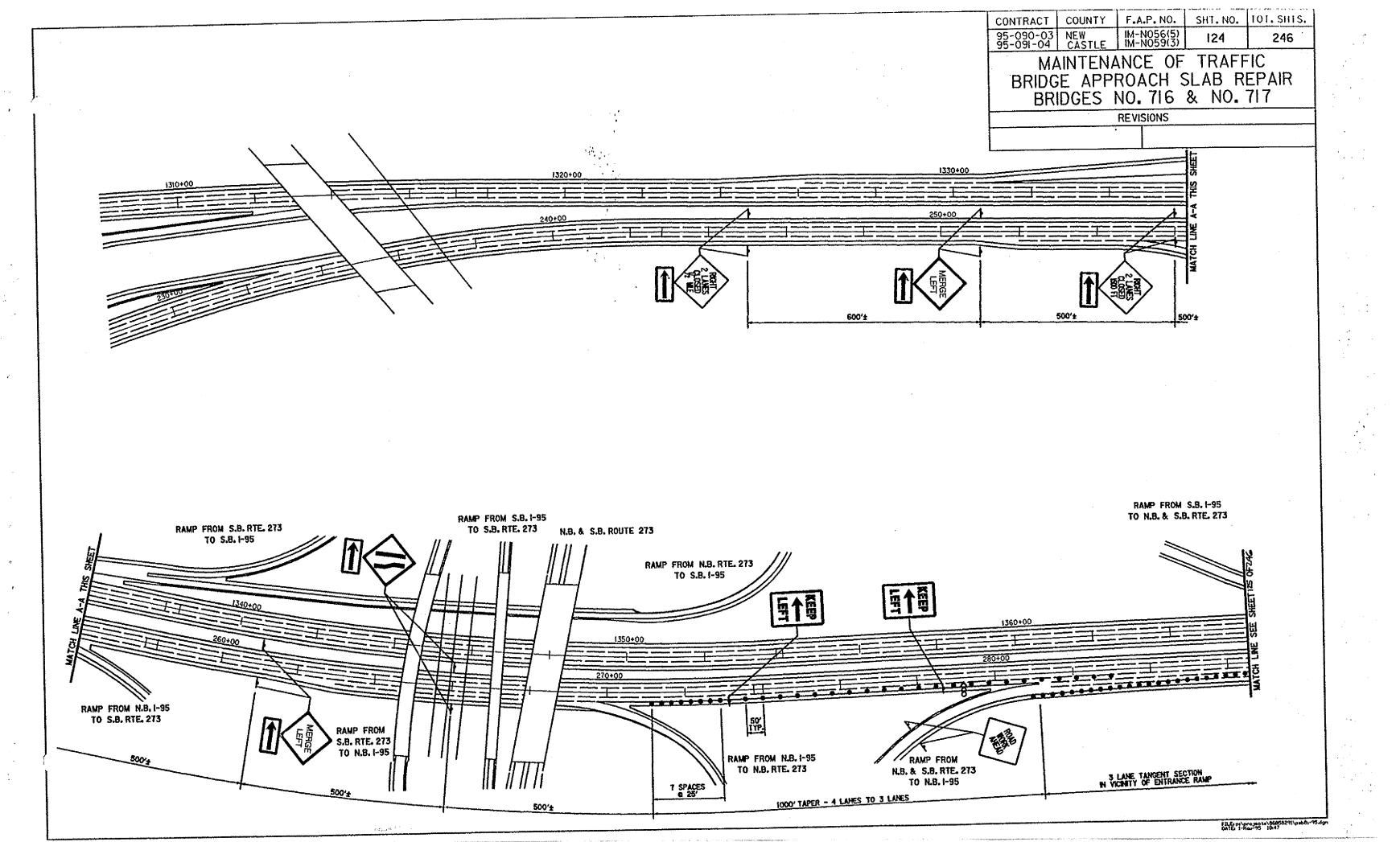
NOT TO SCALE

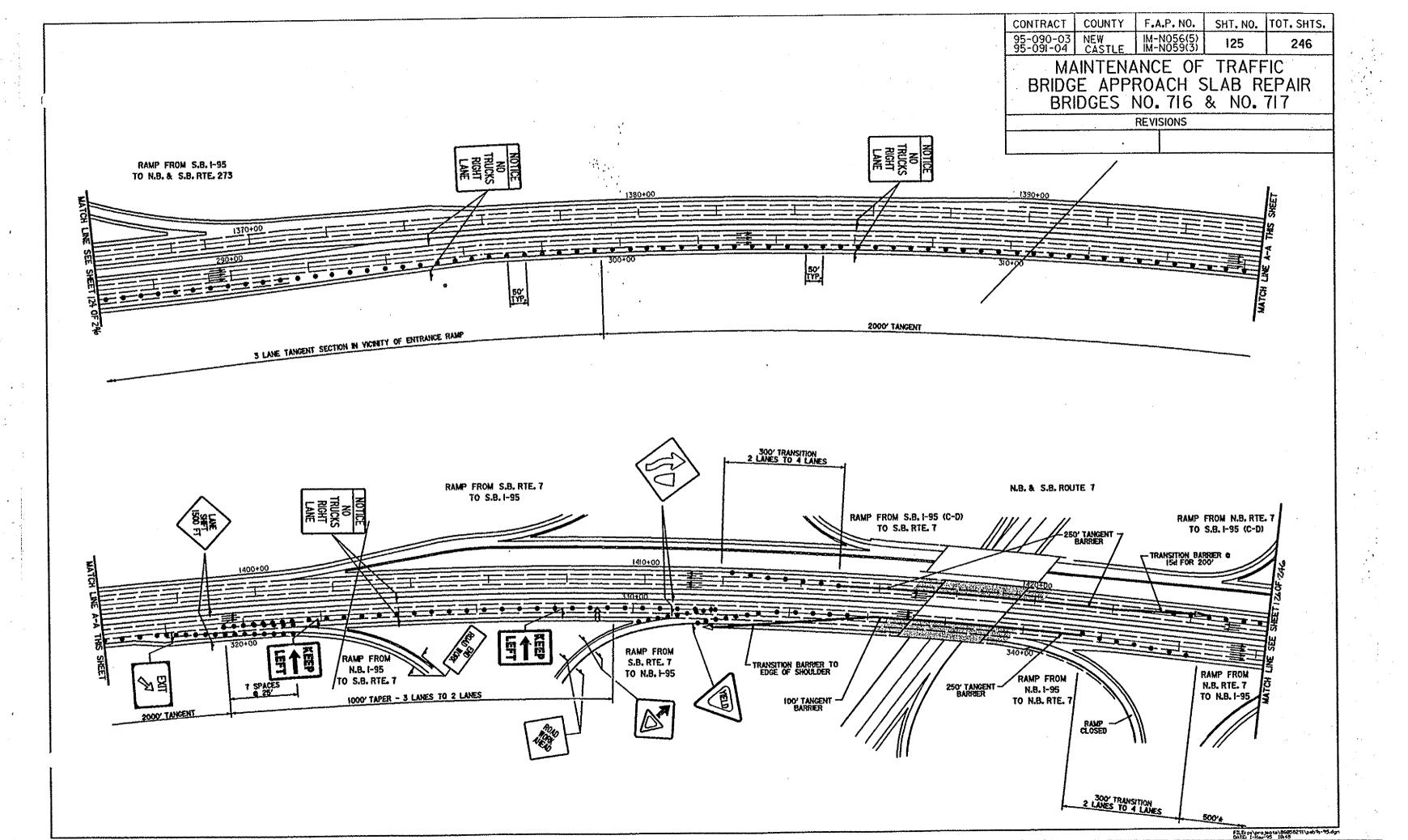


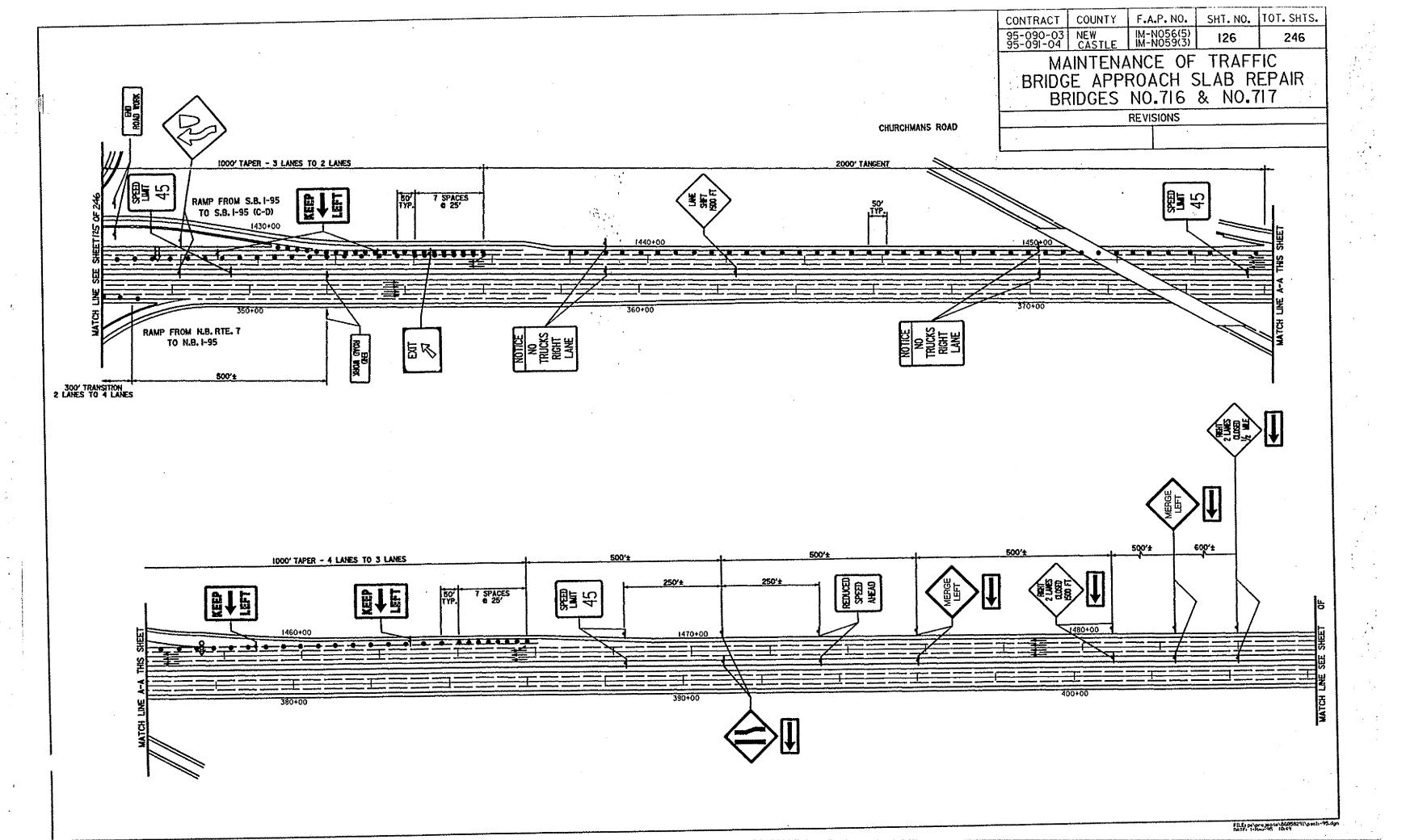


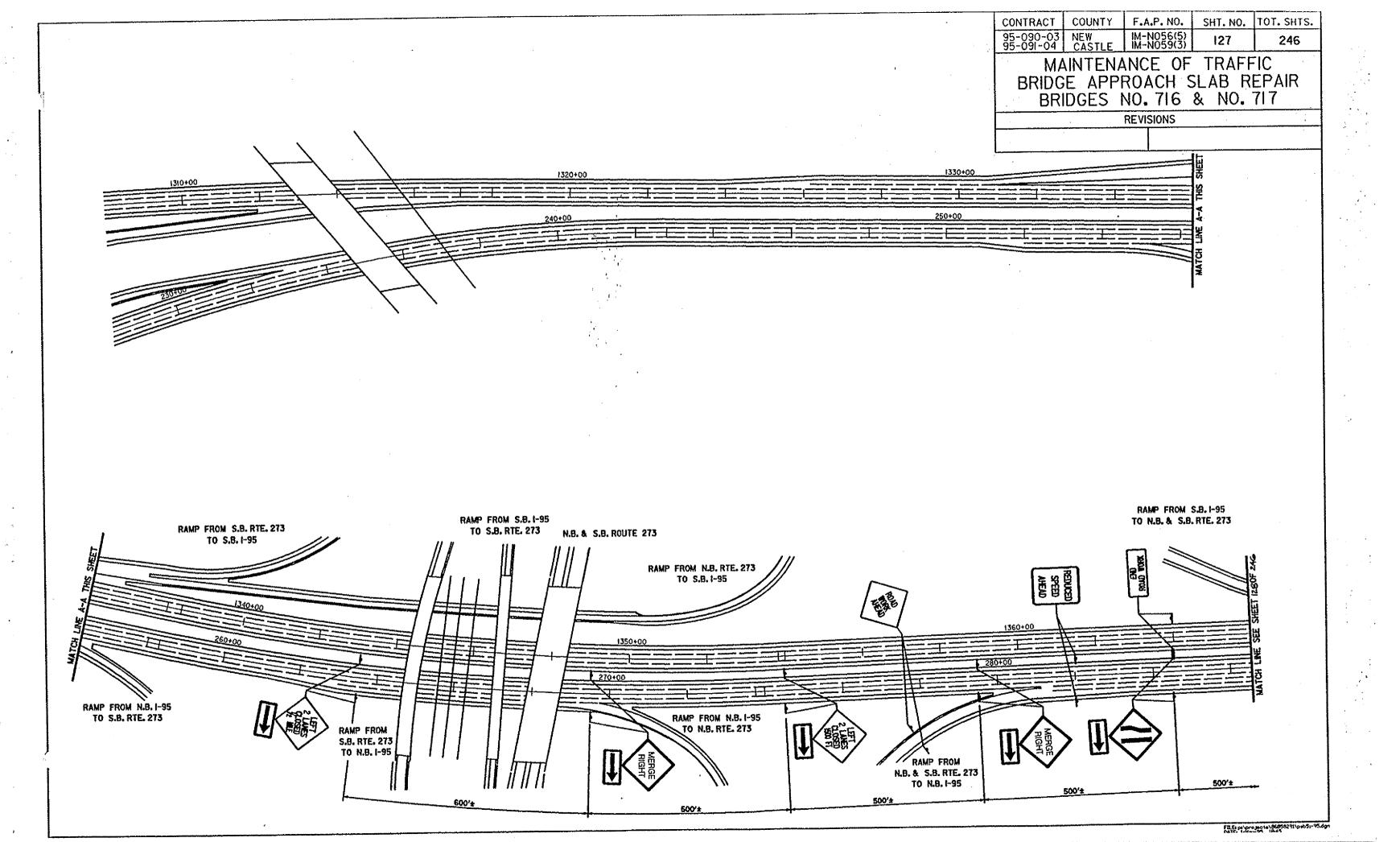


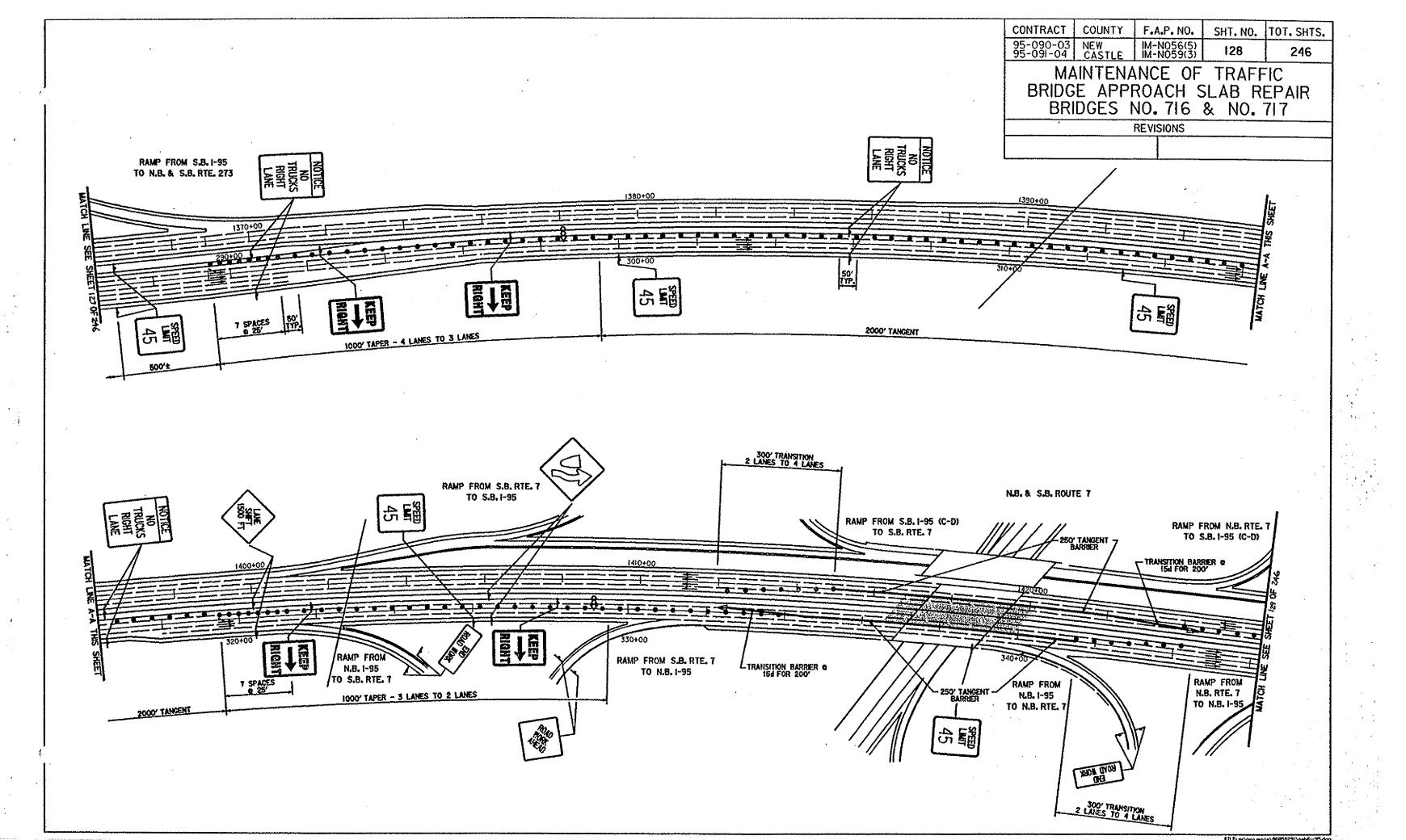


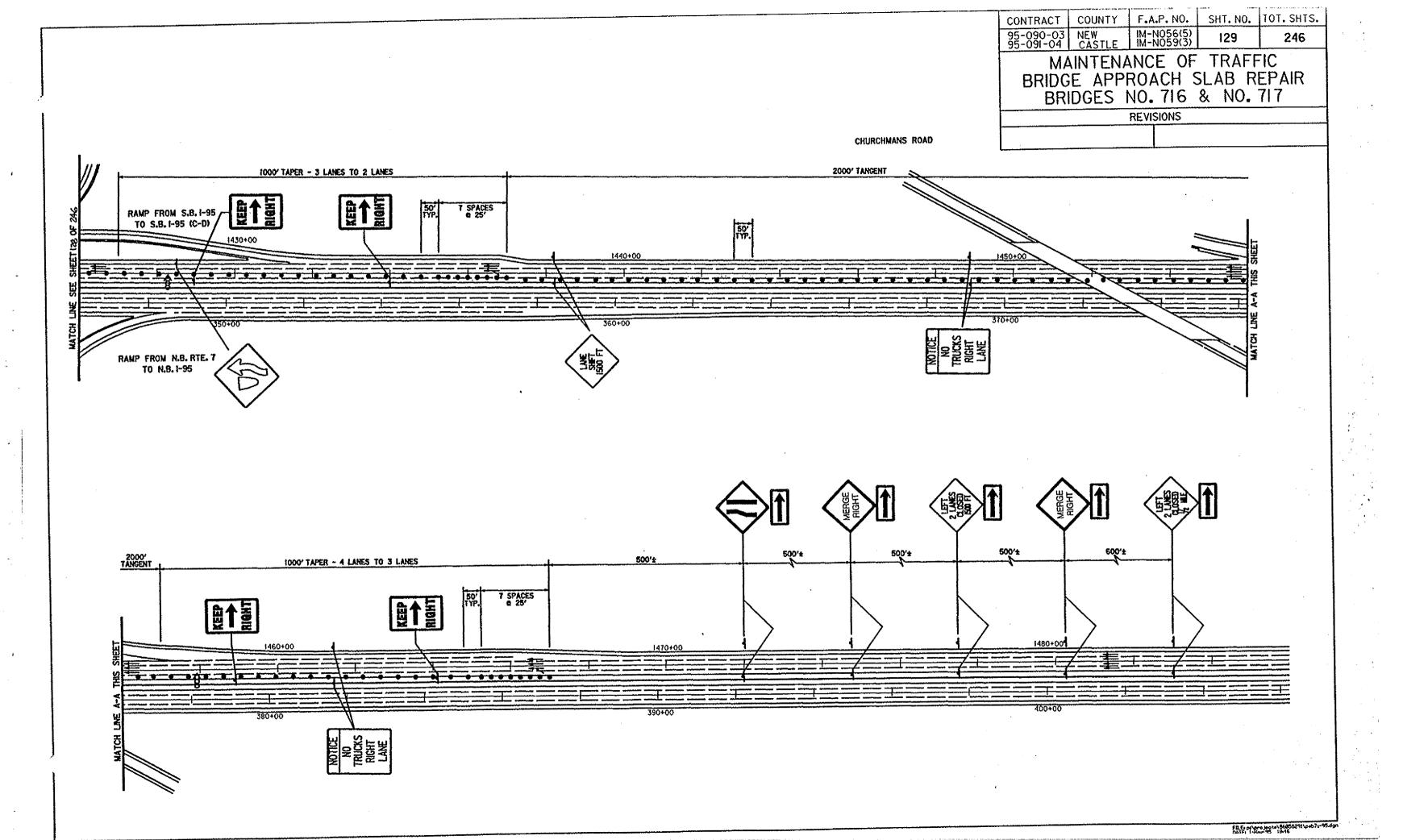


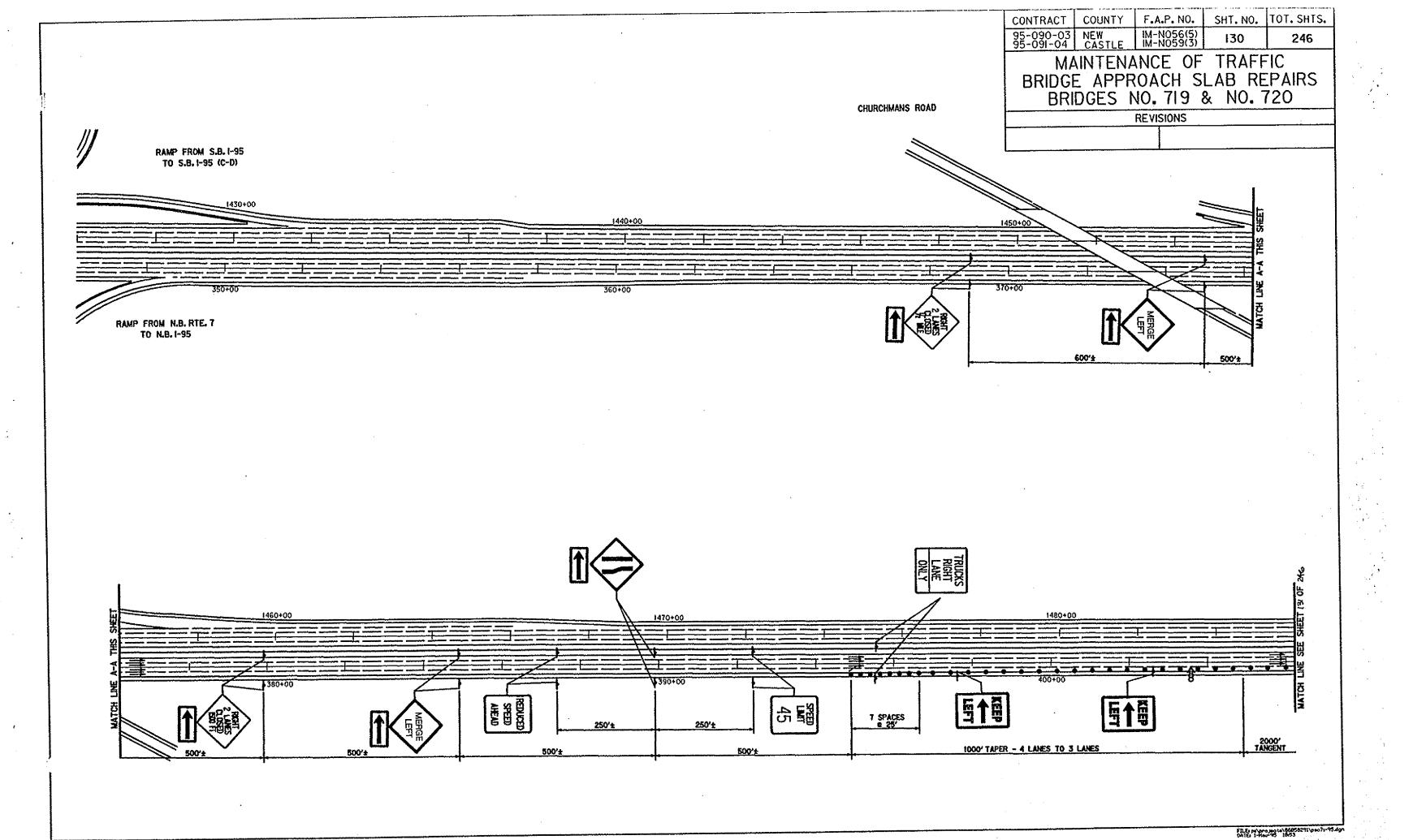


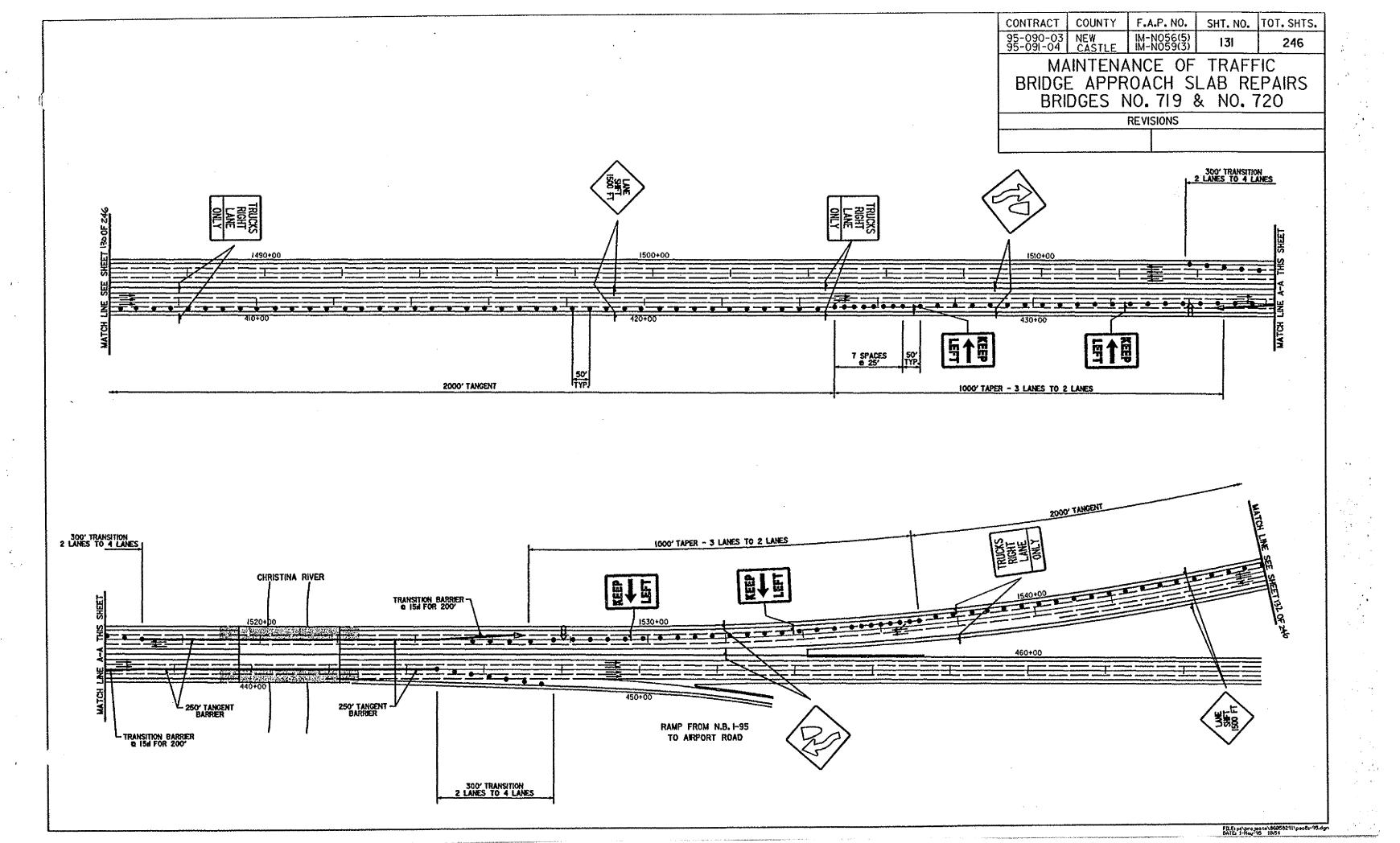


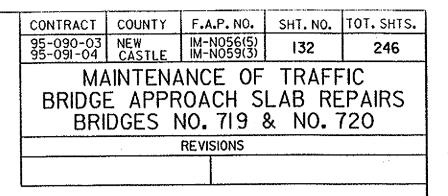




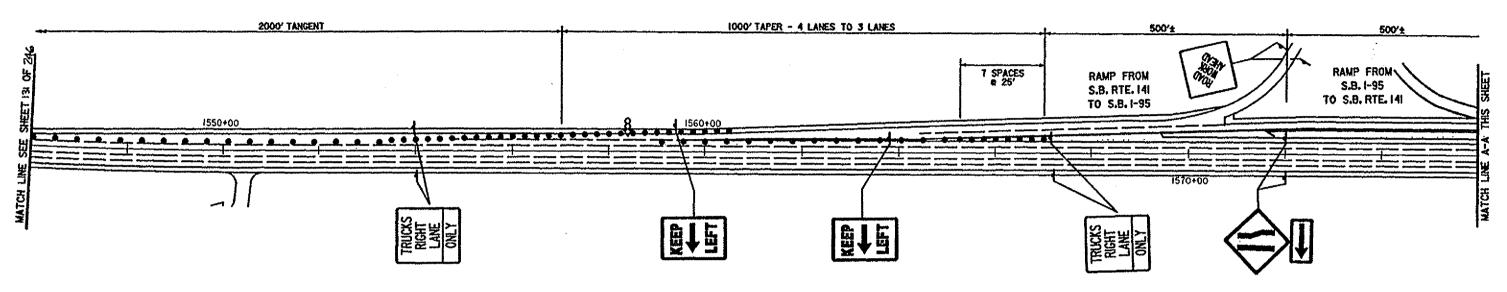


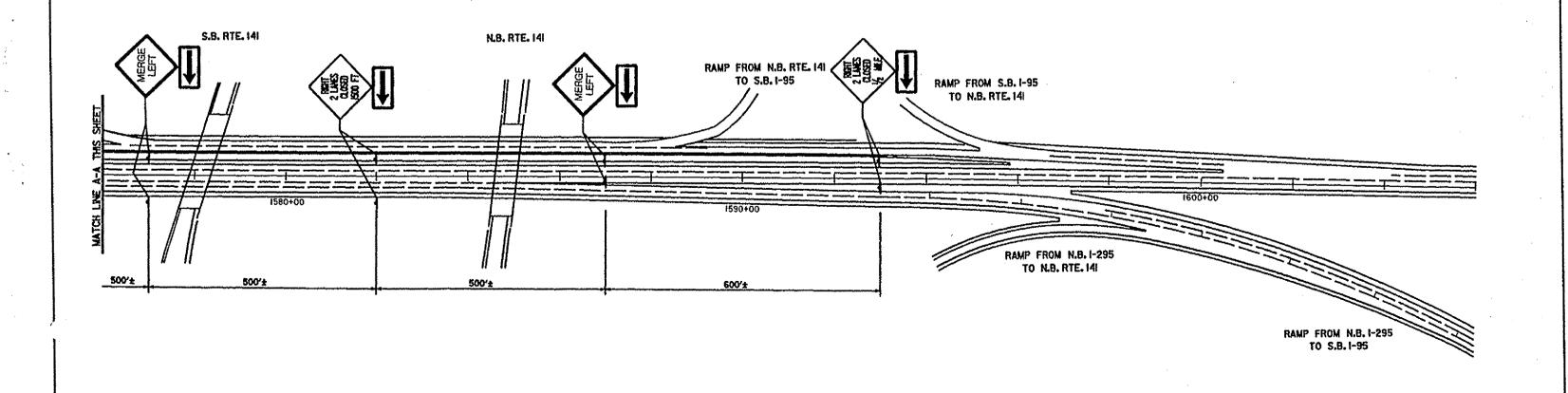


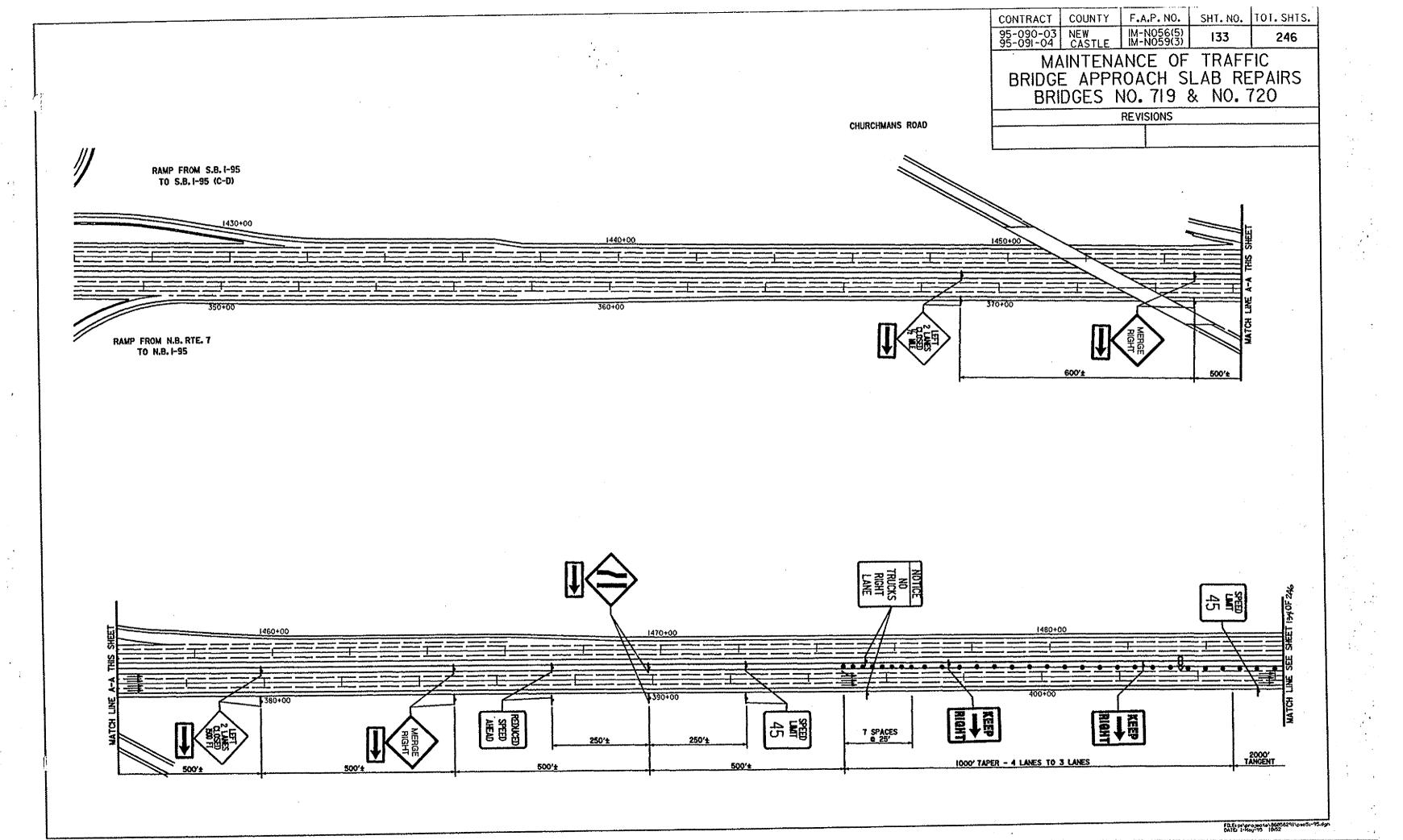


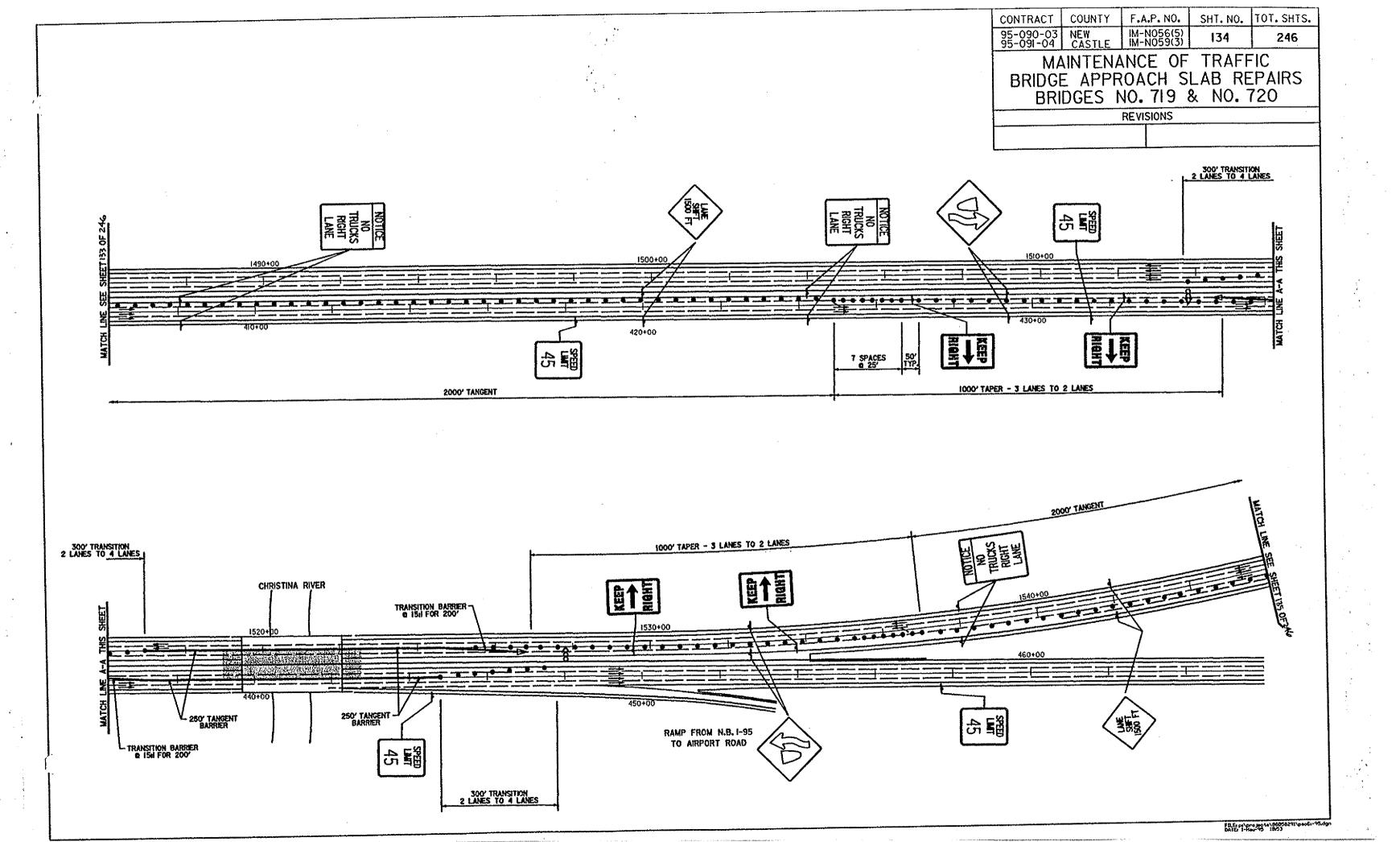


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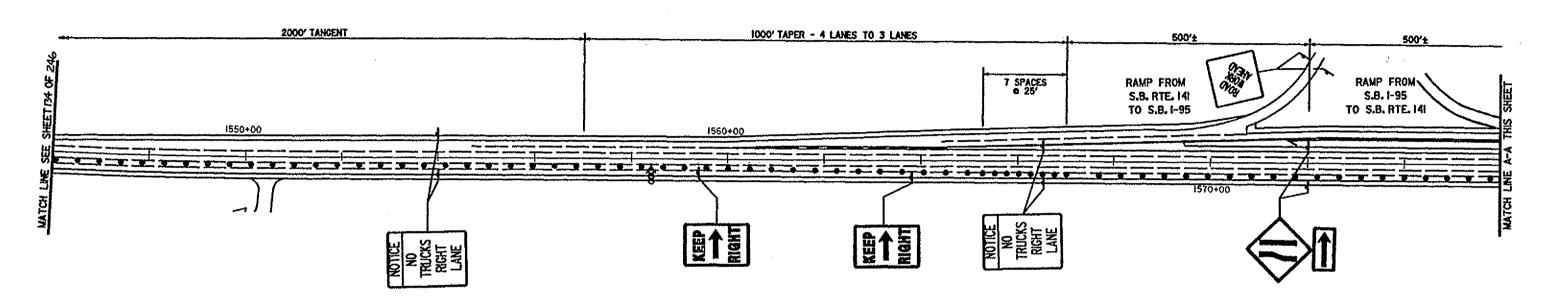


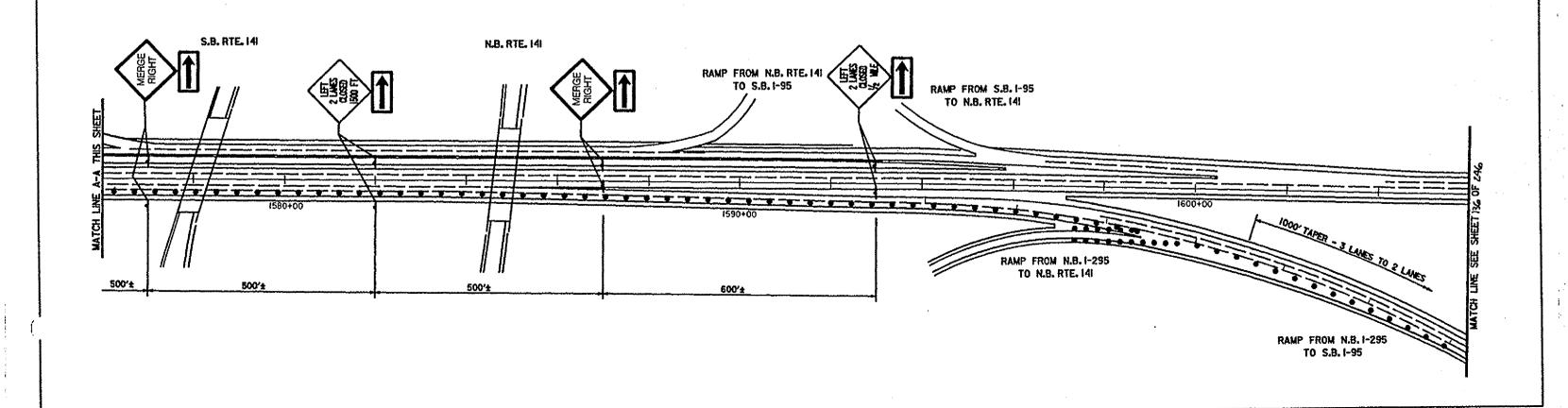
CONTRACT COUNTY F.A.P. NO. SHT. NO. TOT. SHTS.

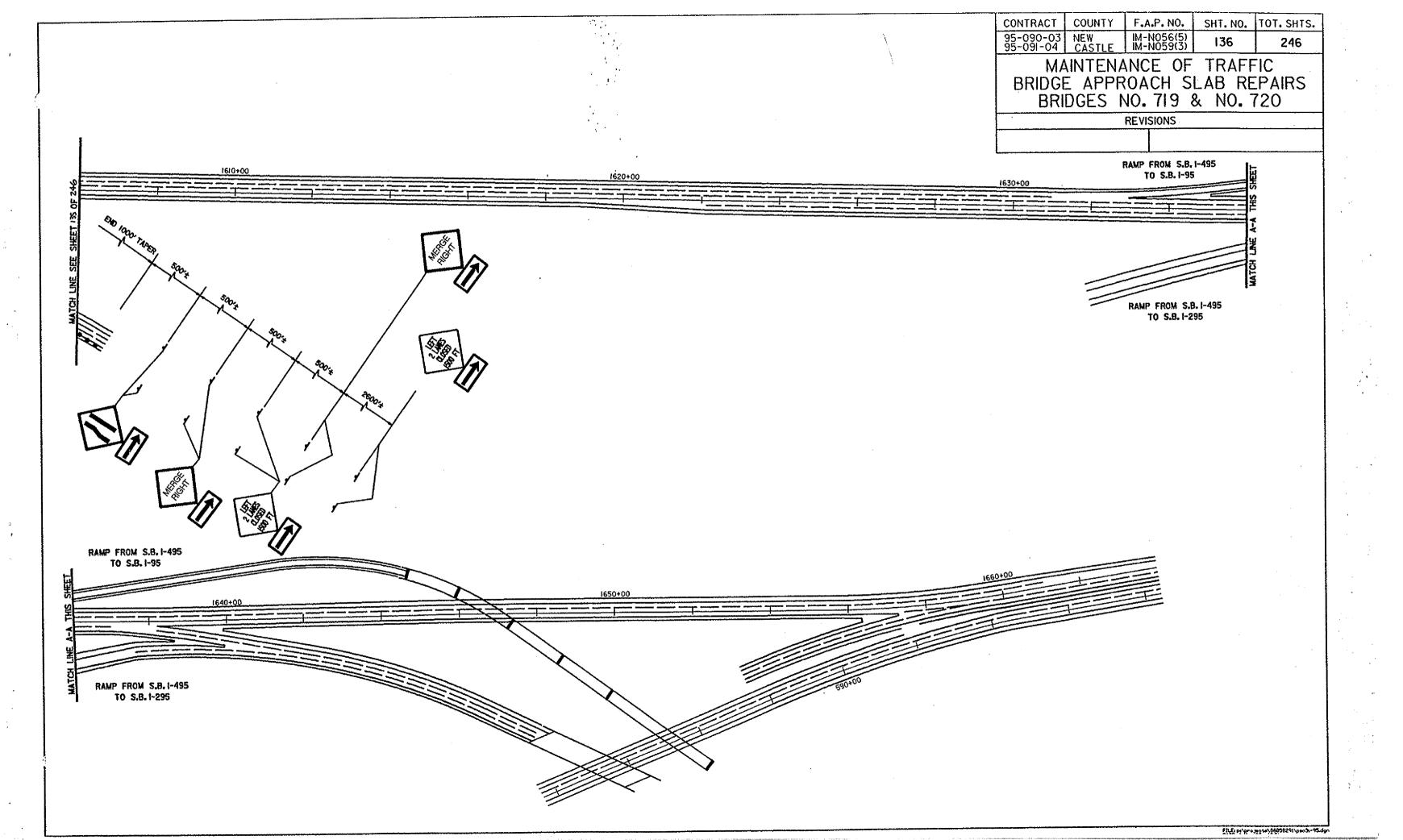
95-090-03 NEW IM-N056(5) I35 246

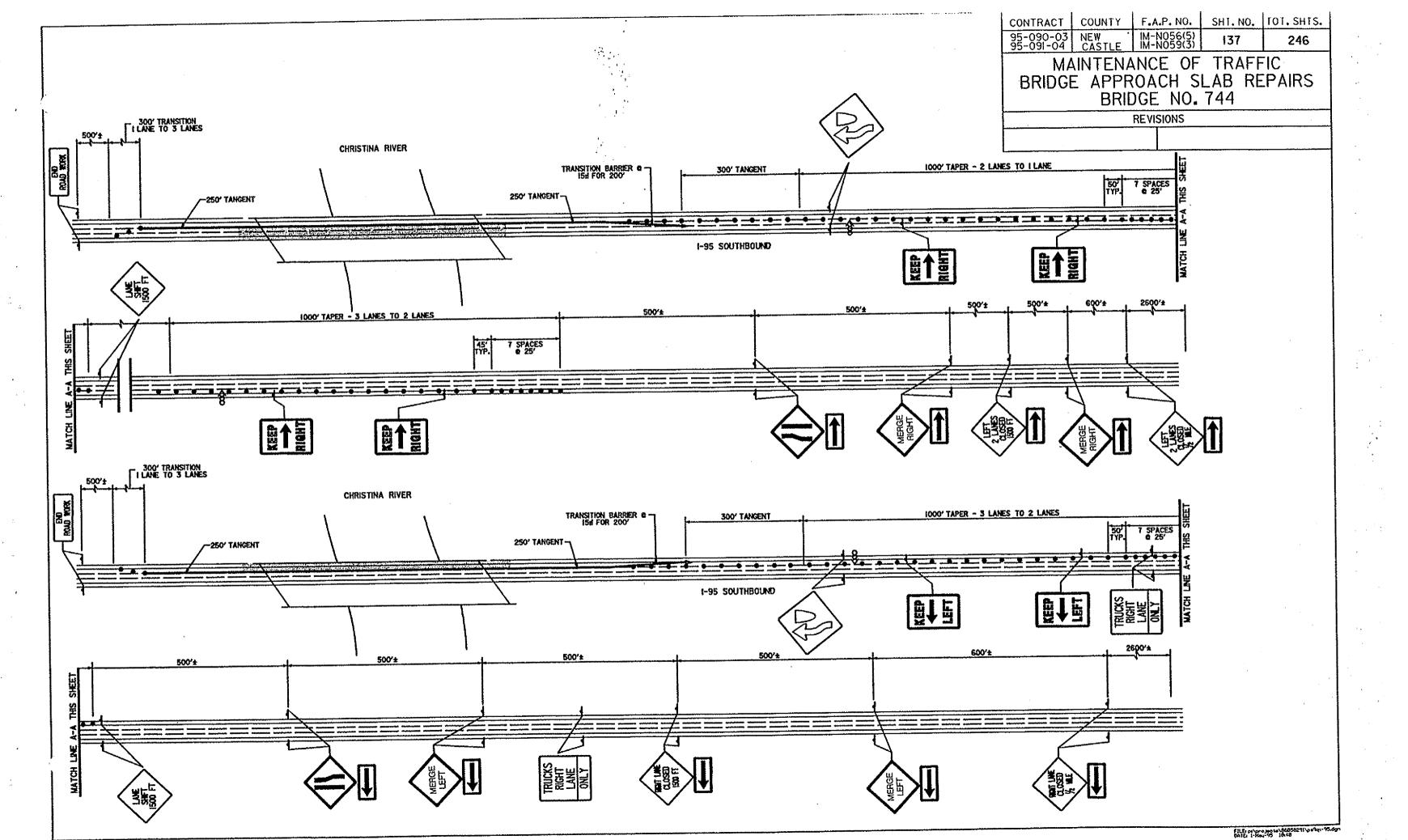
MAINTENANCE OF TRAFFIC
BRIDGE APPROACH SLAB REPAIRS
BRIDGES NO. 719 & NO. 720

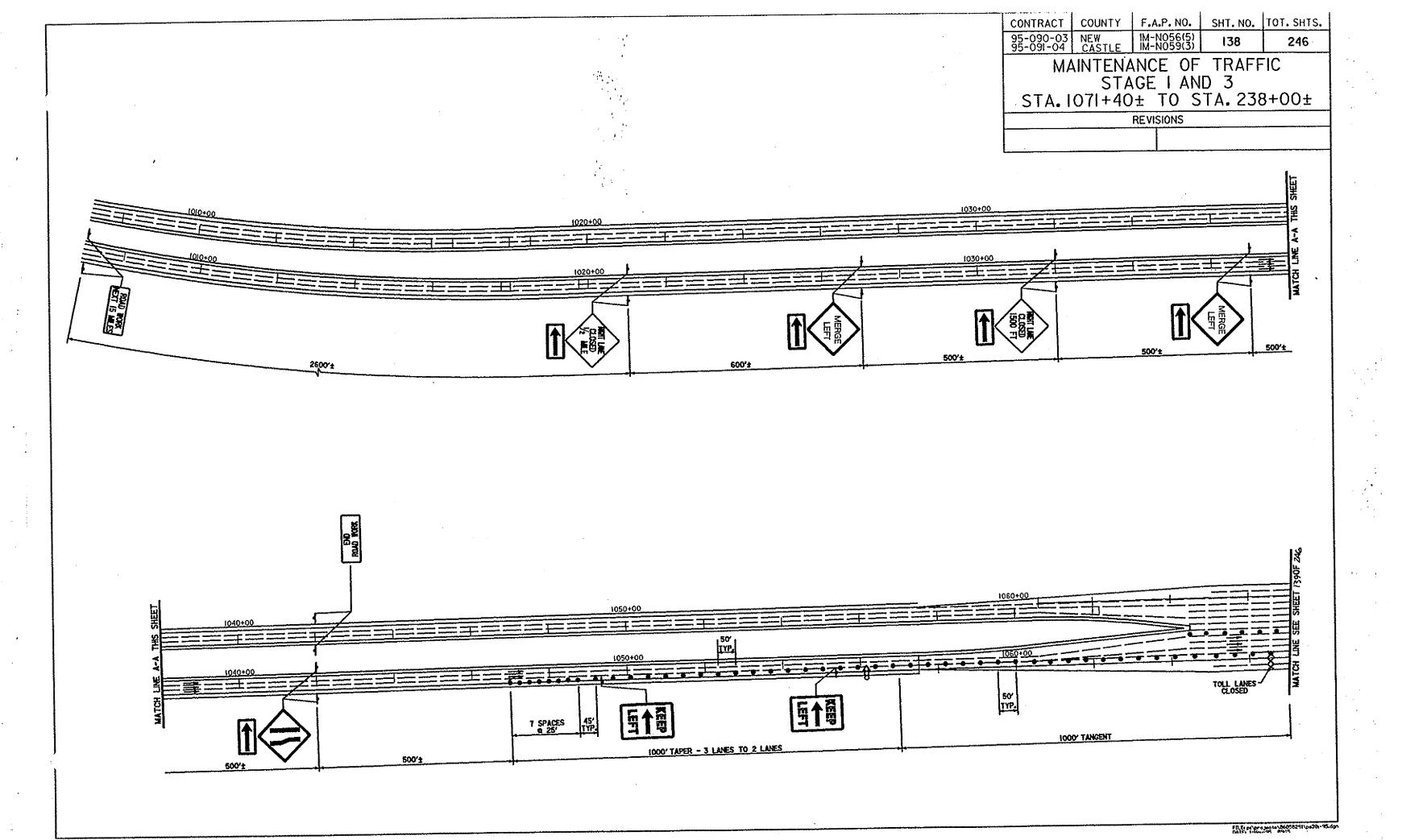
REVISIONS

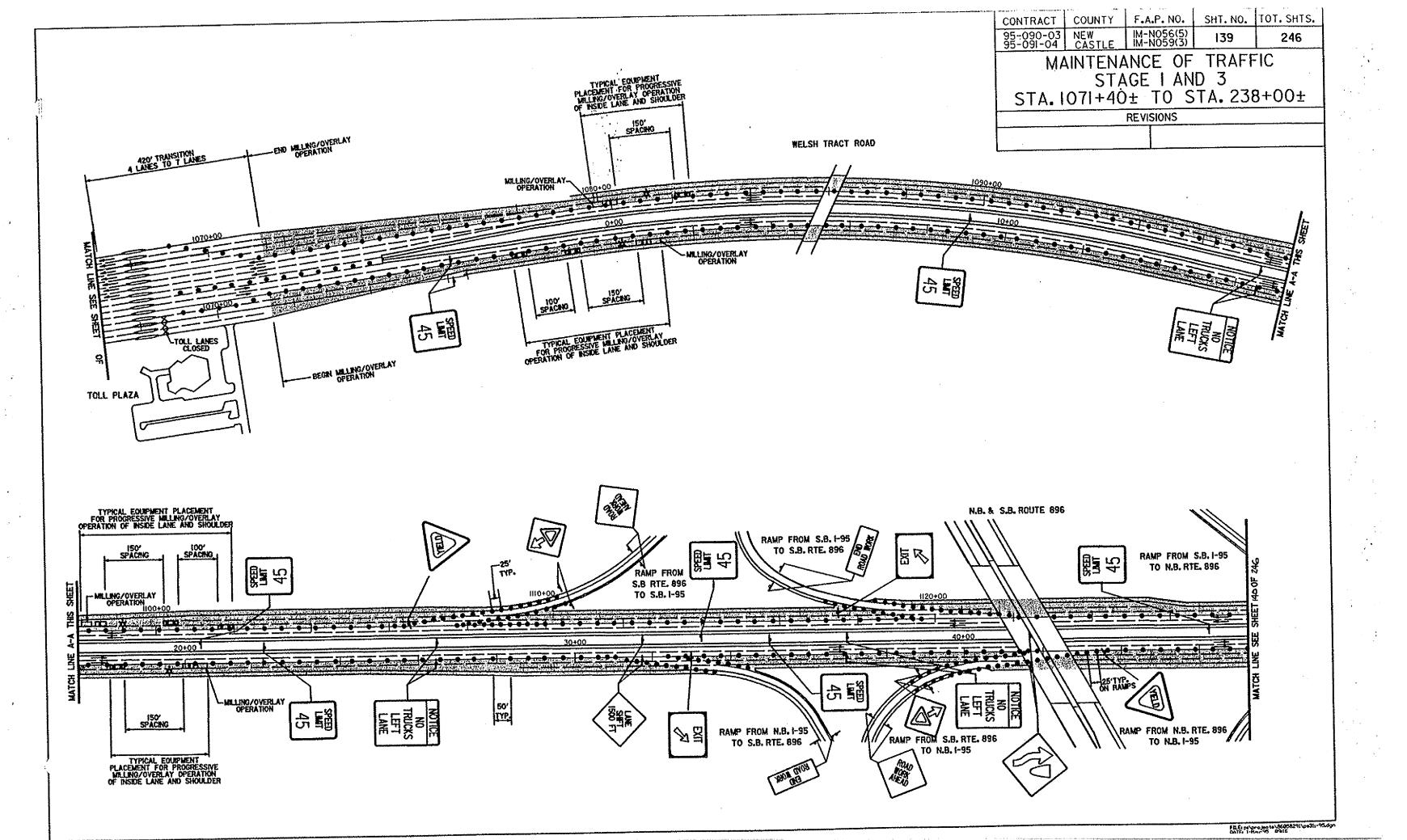


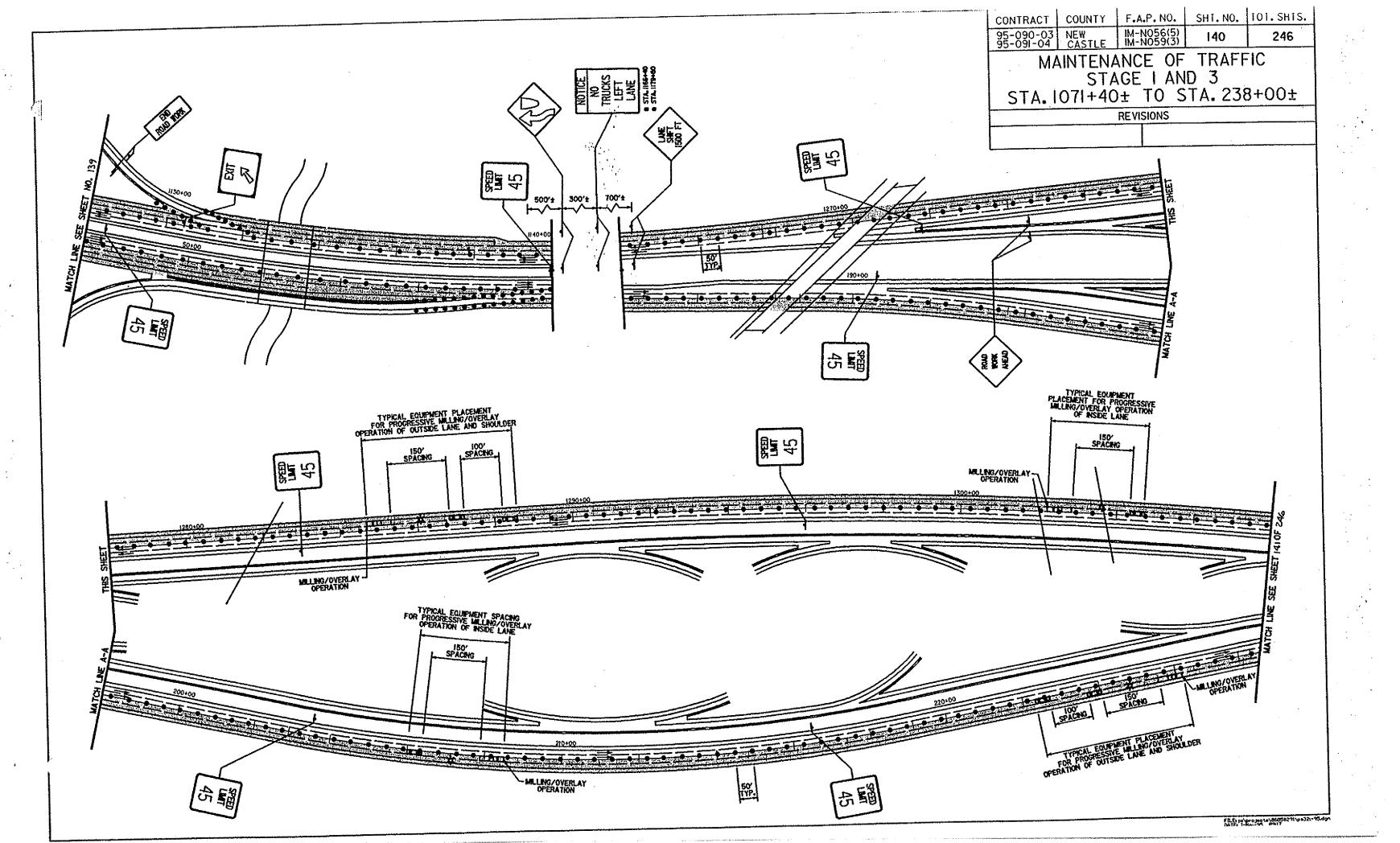


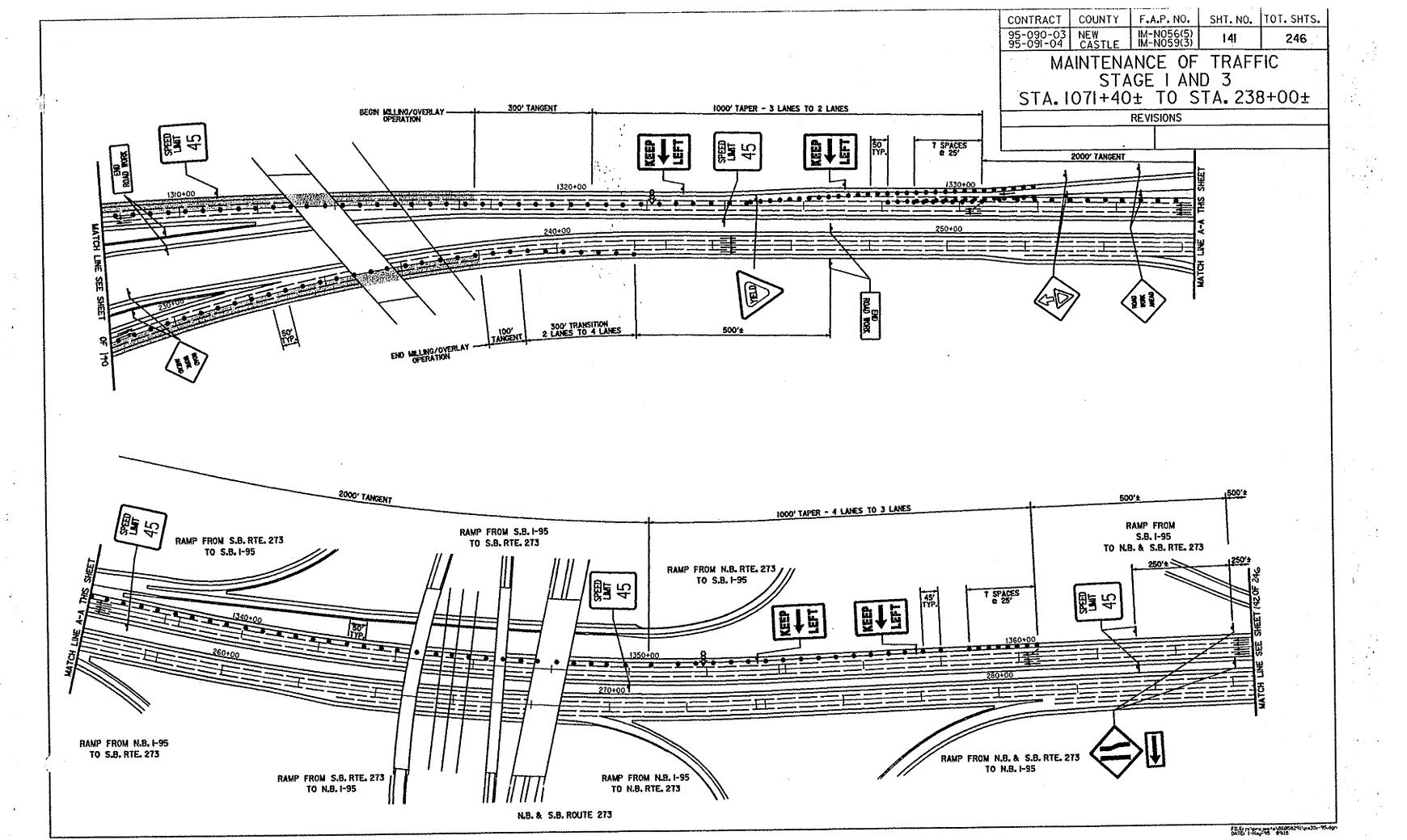


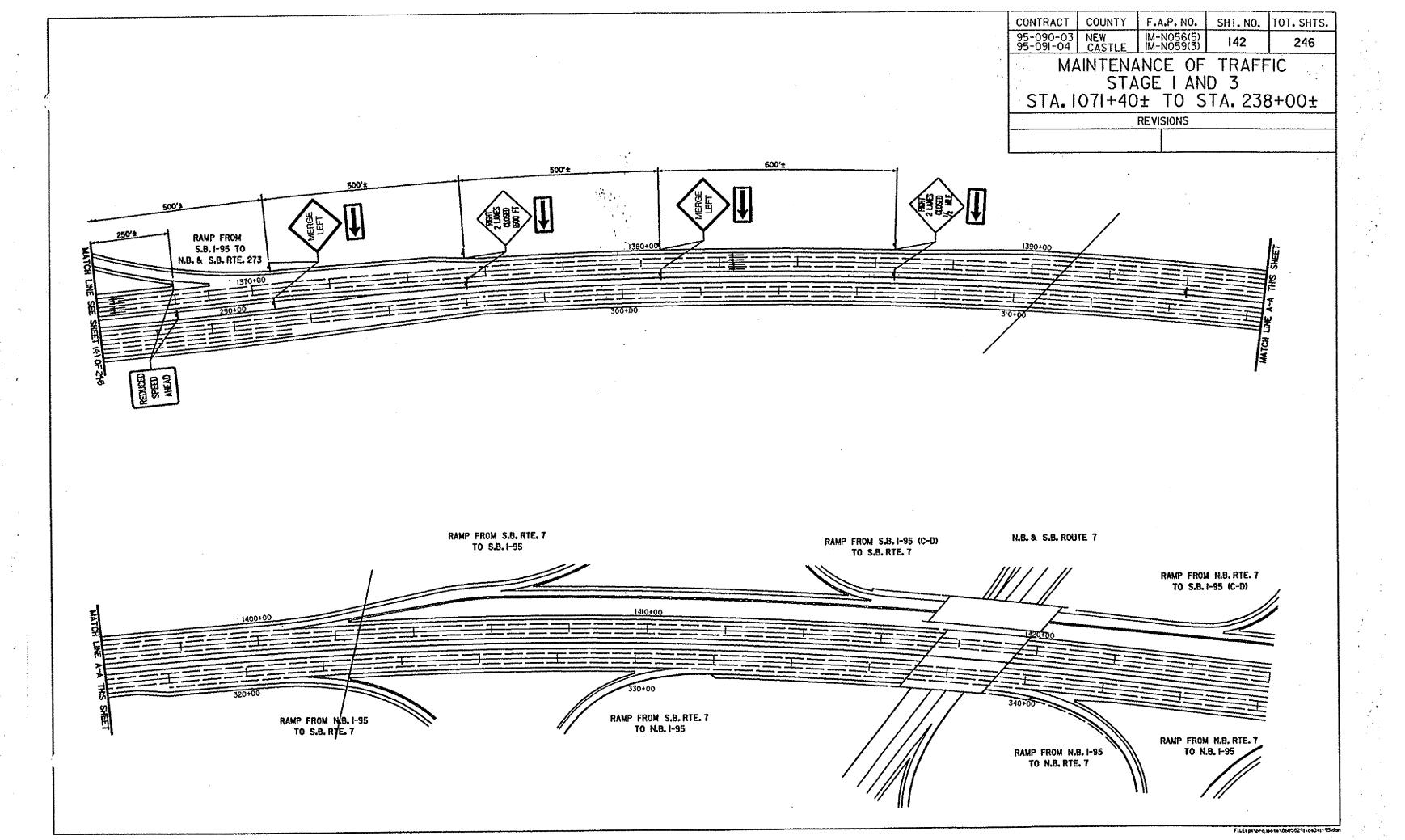


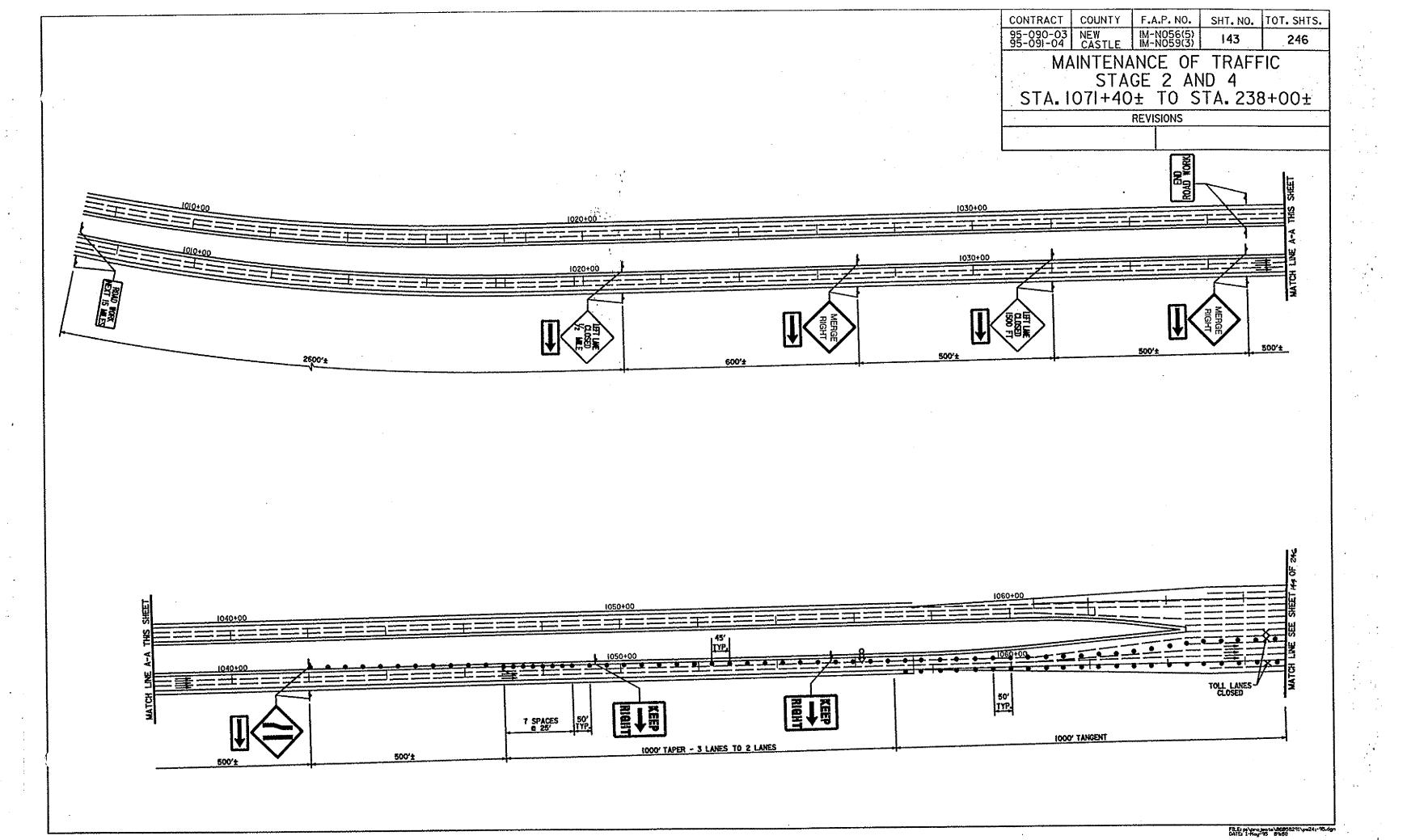


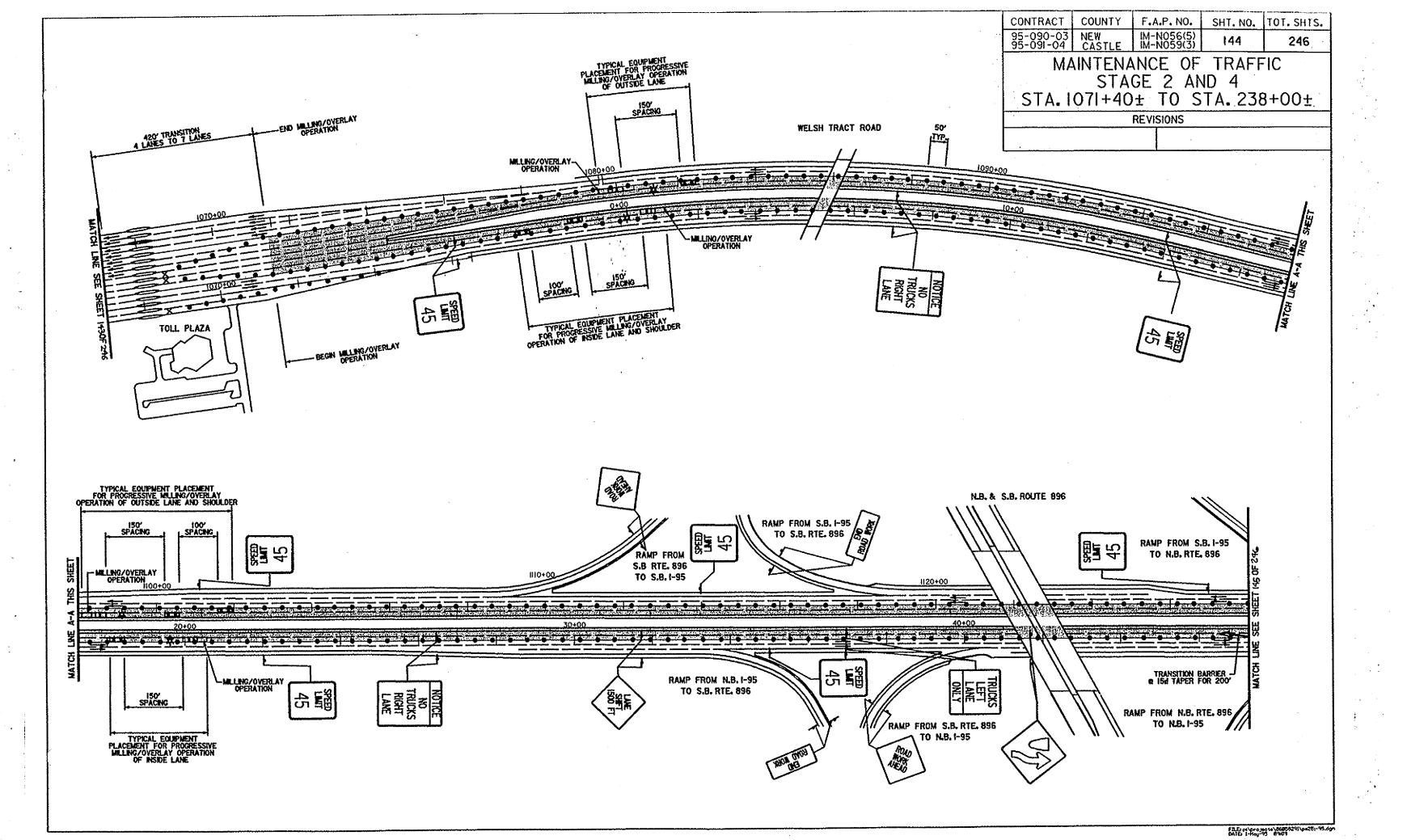


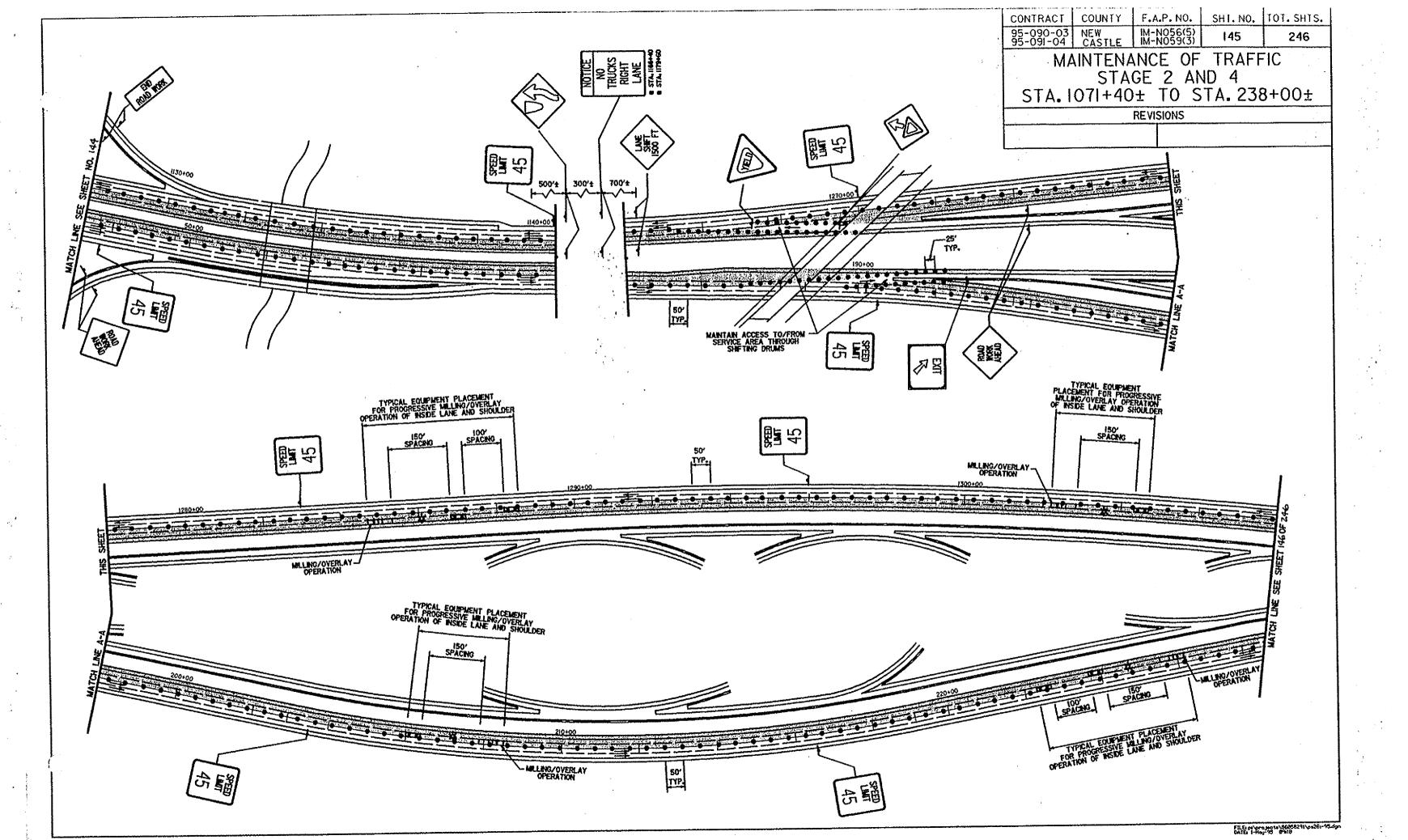


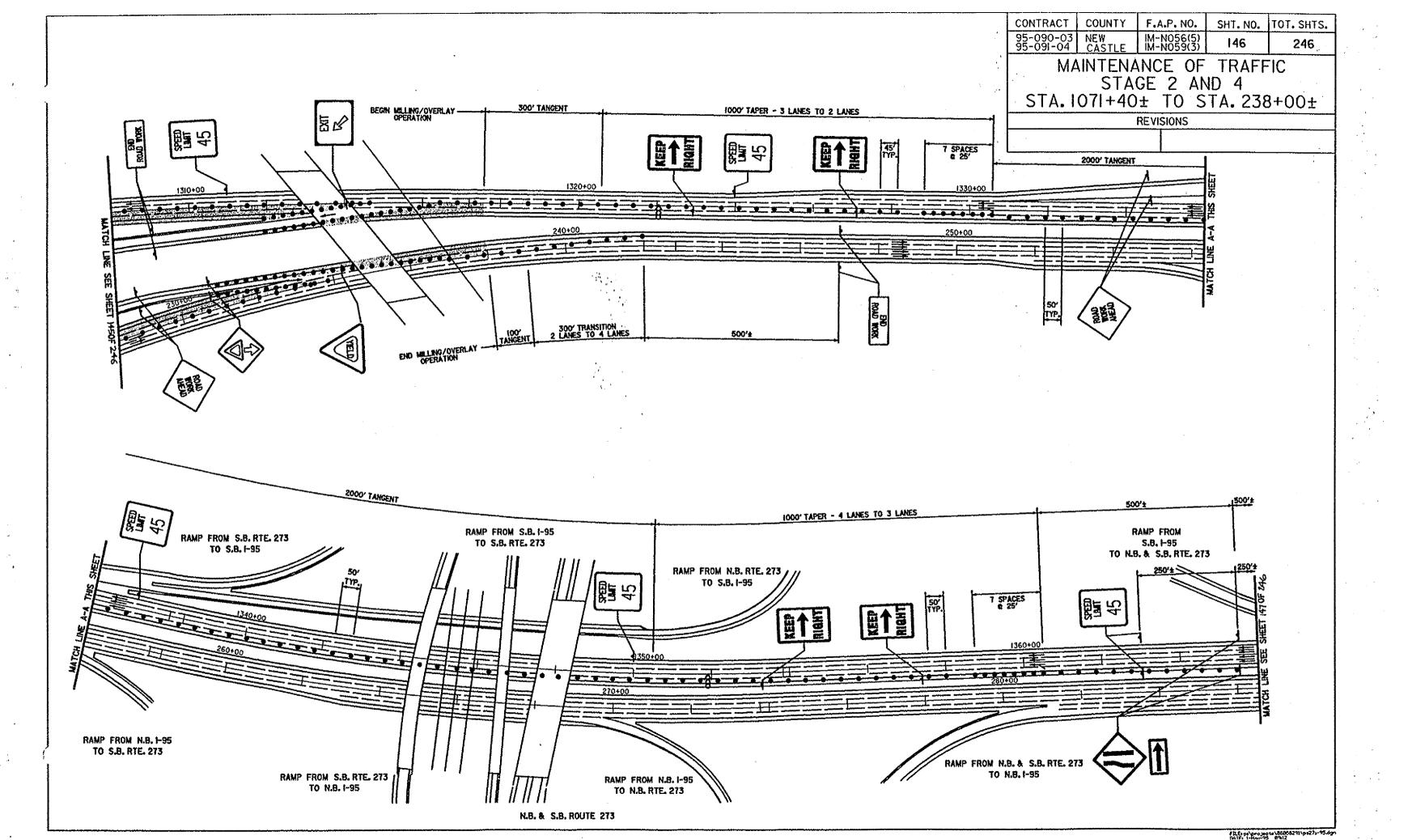


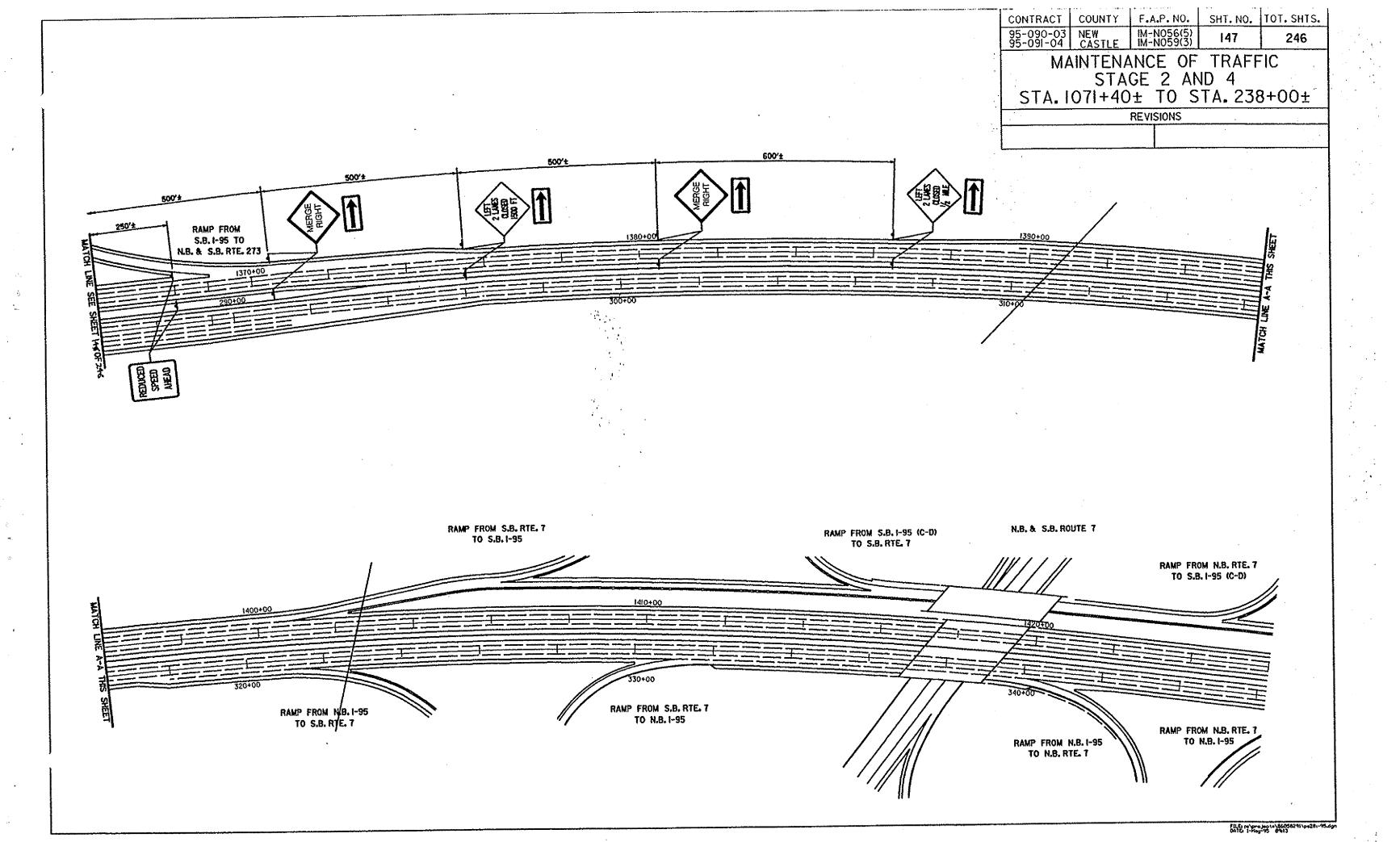




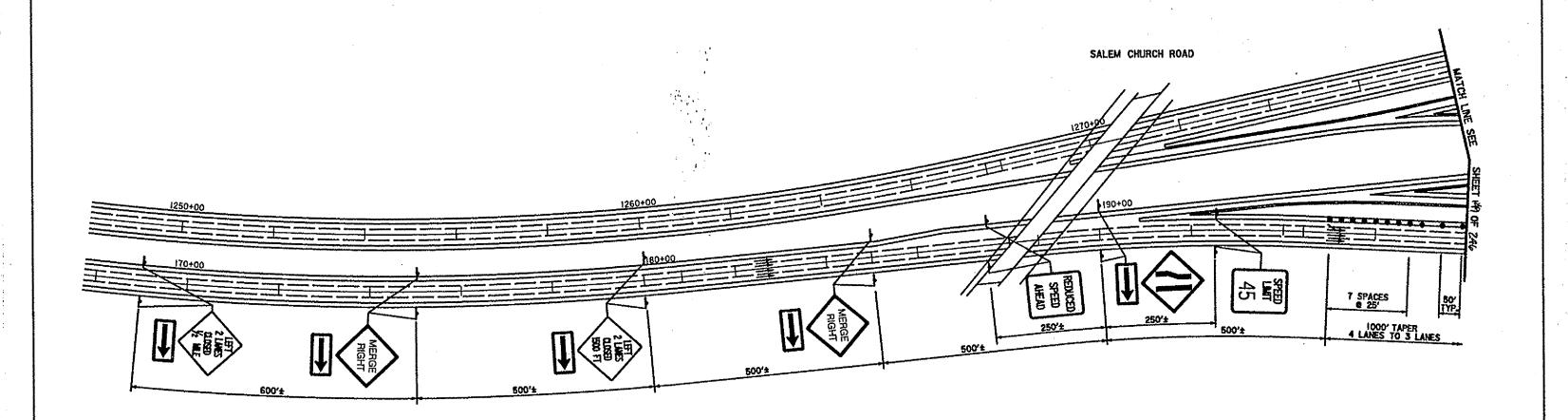


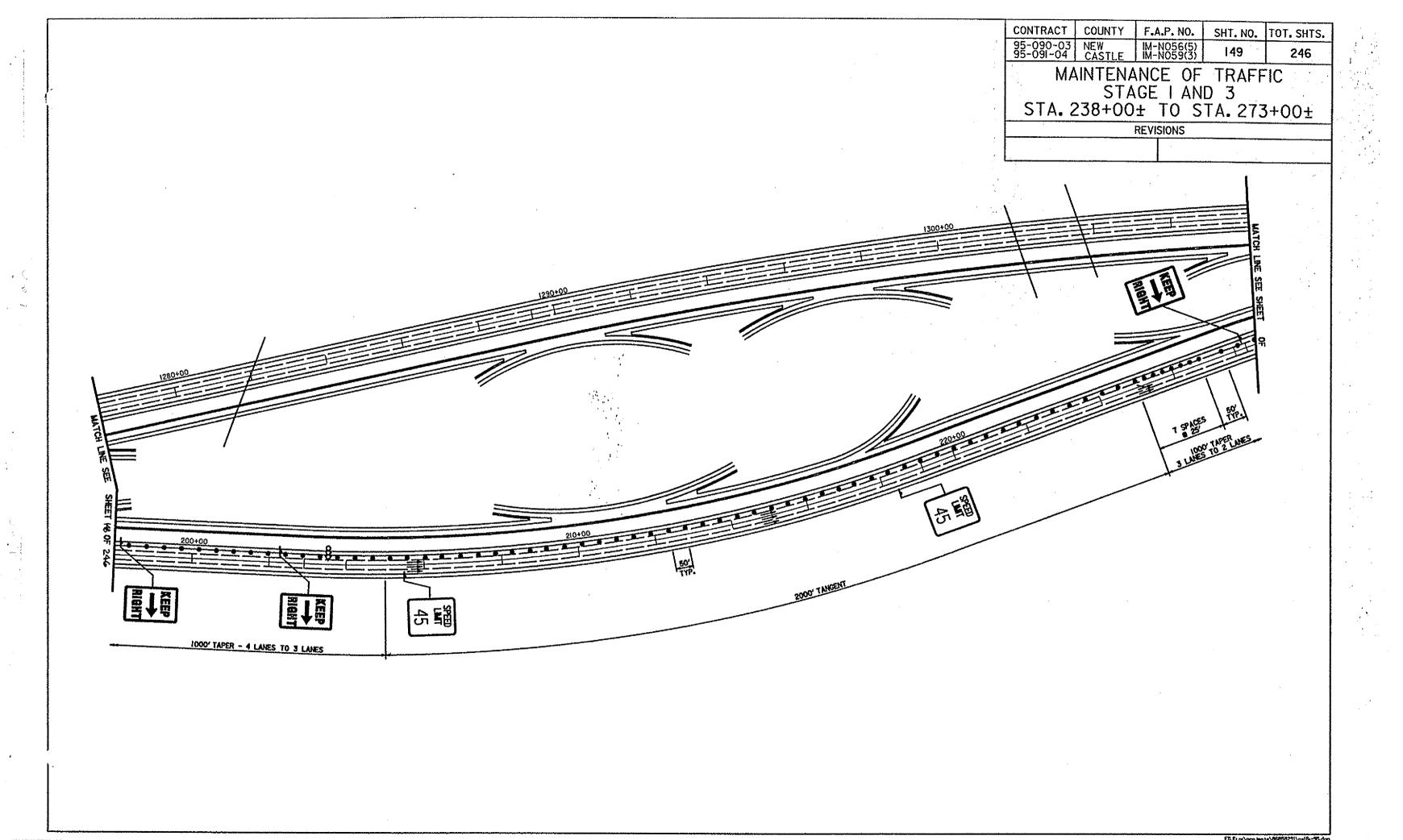


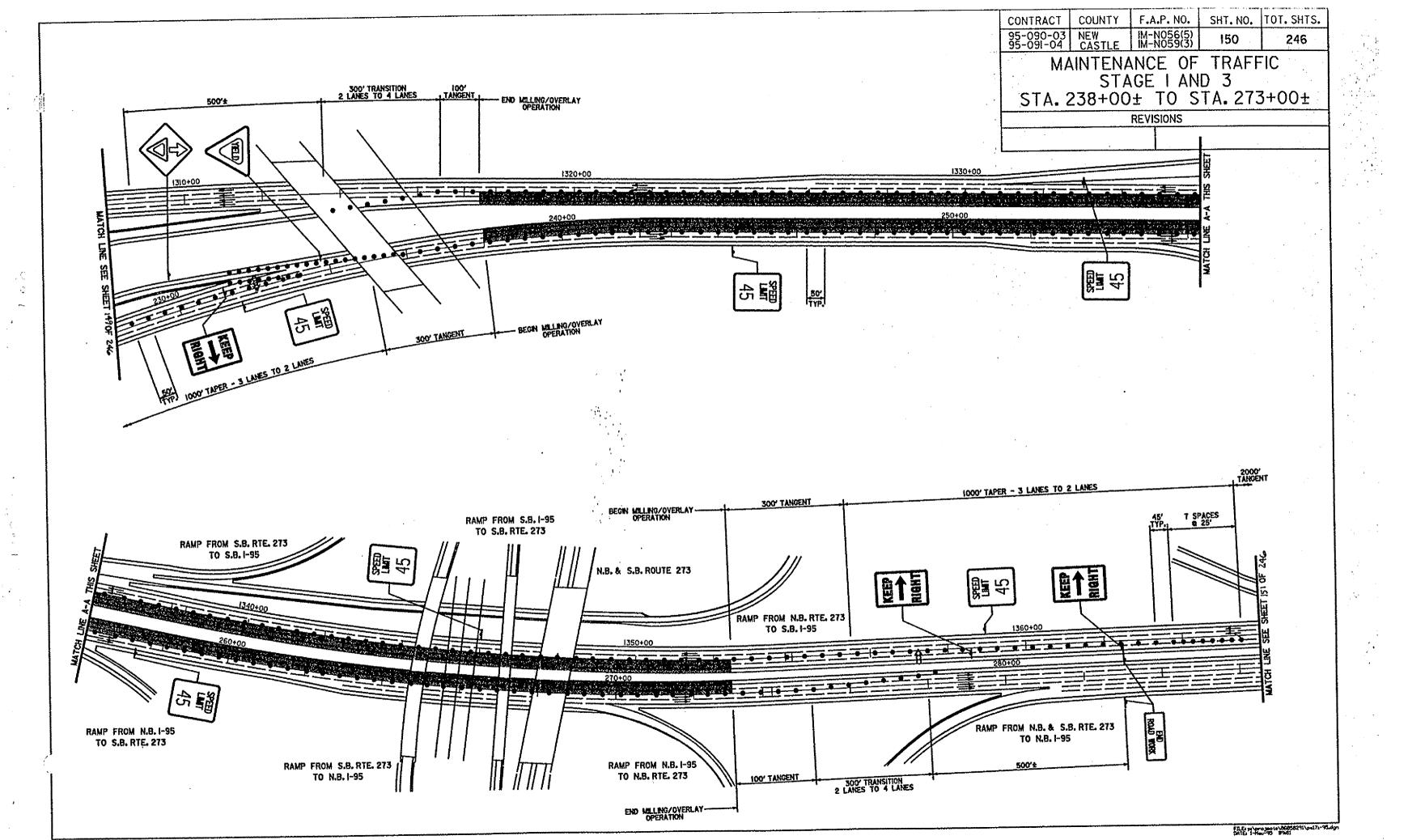


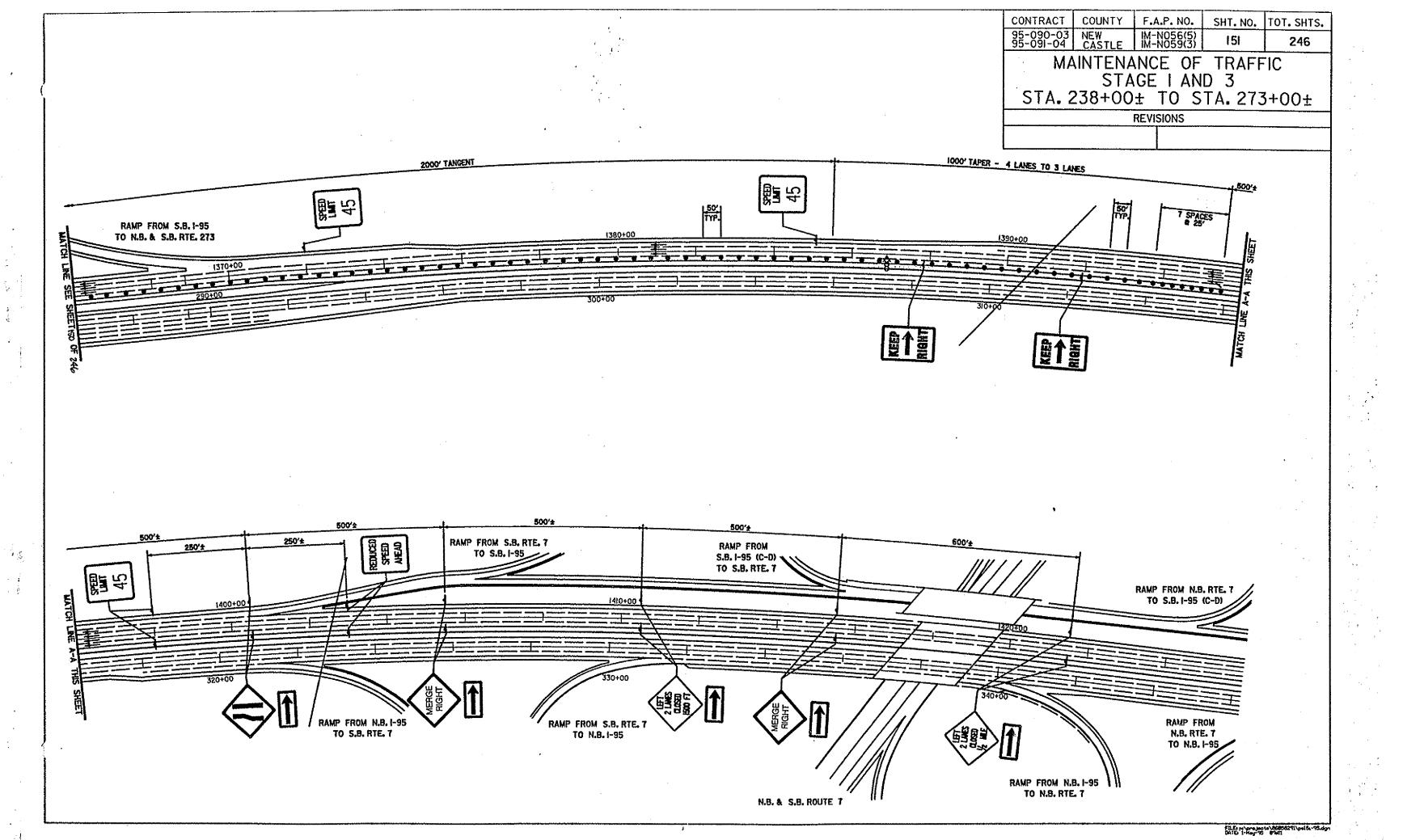


CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHTS.		
95-090-03 95-091-04	NEW CASTLE	IM-N056(5) IM-N059(3)	148	246		
MAINTENANCE OF TRAFFIC STAGE I AND 3						
STA. 238+00± TO STA. 273+00±						
REVISIONS						

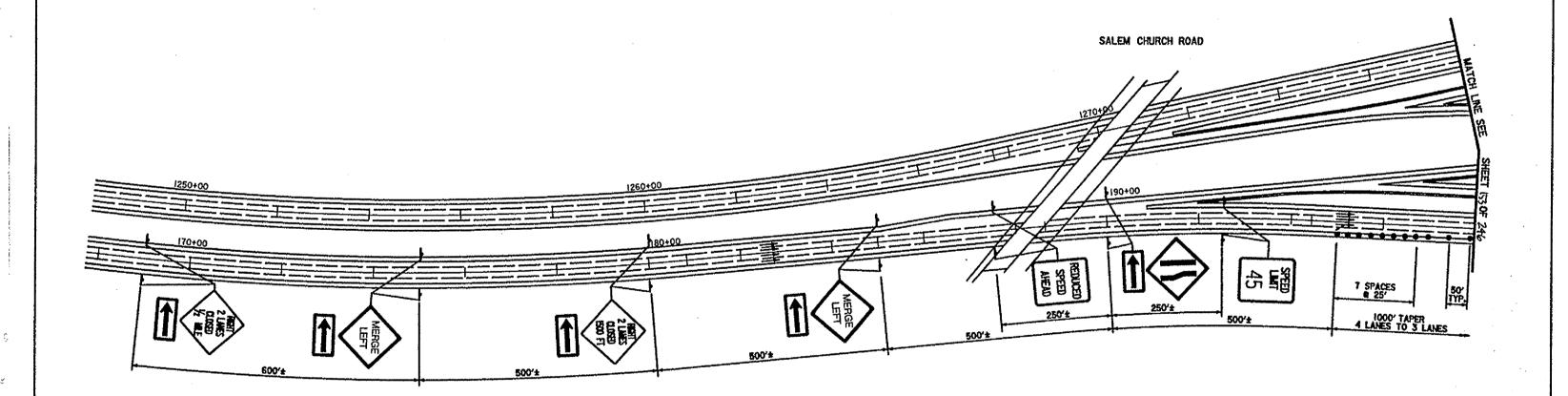




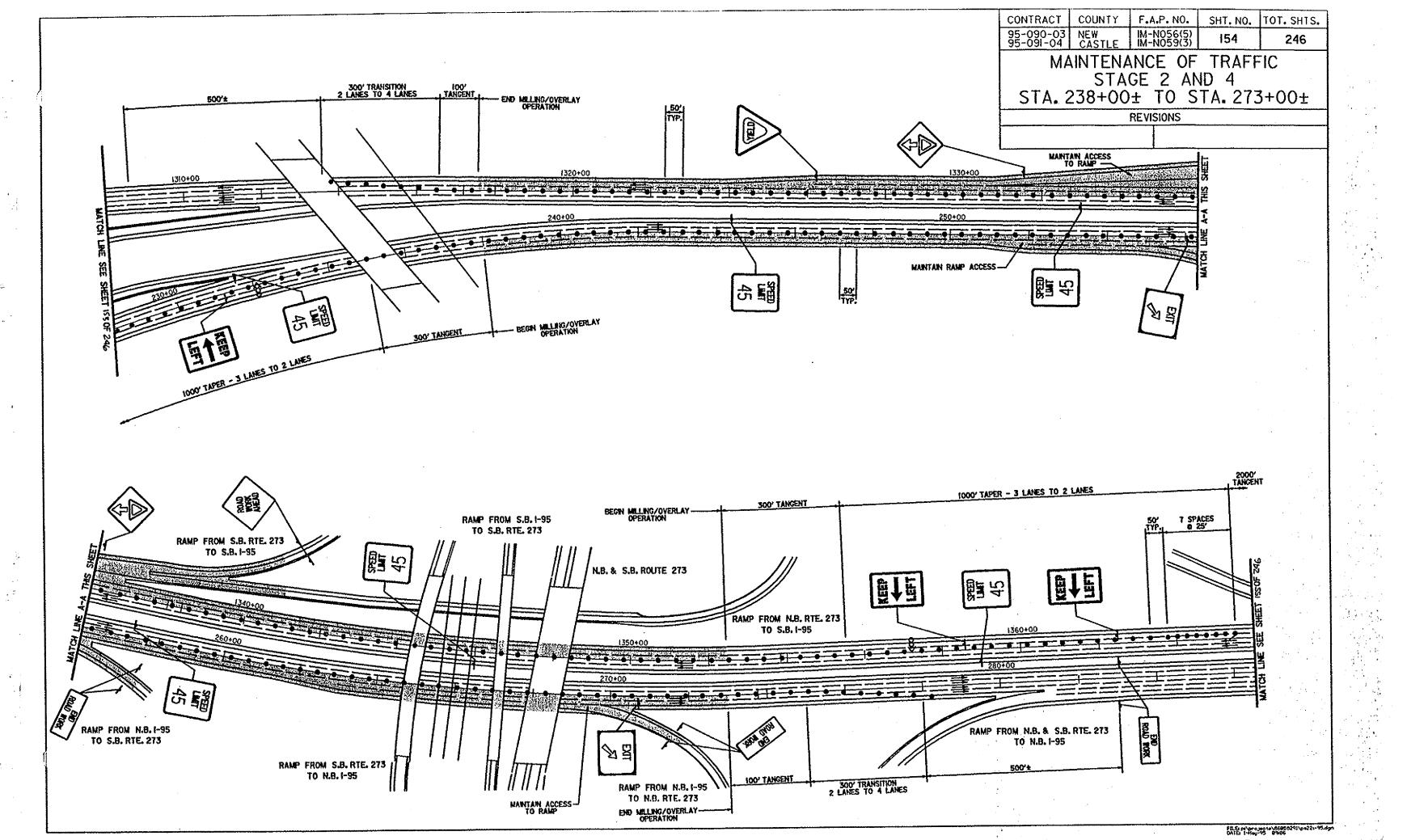


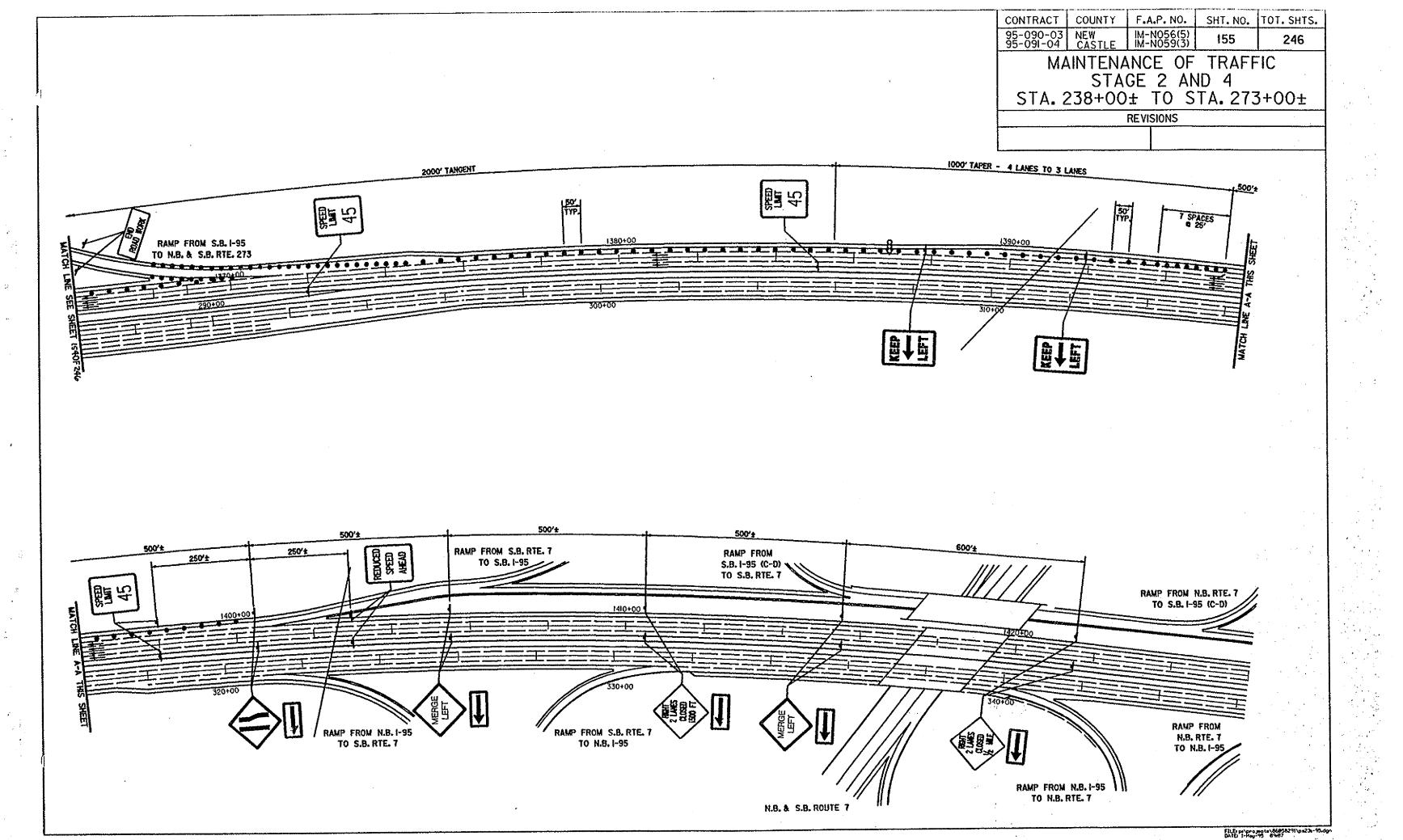


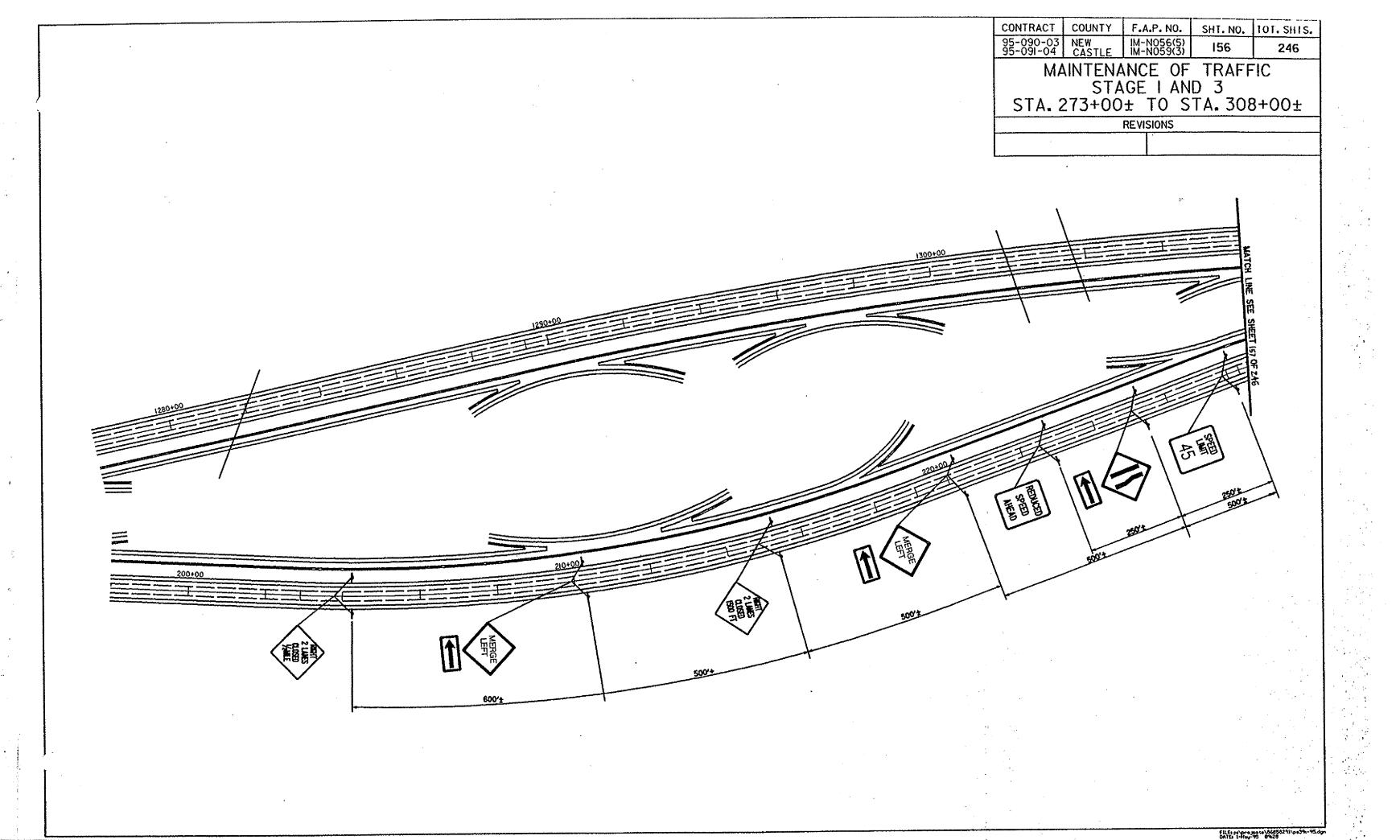
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CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHTS.		
95-090-03 95-091-04	NEW CASTLE	IM-N056(5) IM-N059(3)	152	246		
MAINTENANCE OF TRAFFIC STAGE 2 AND 4 STA. 238+00± TO STA. 273+00±						
REVISIONS						

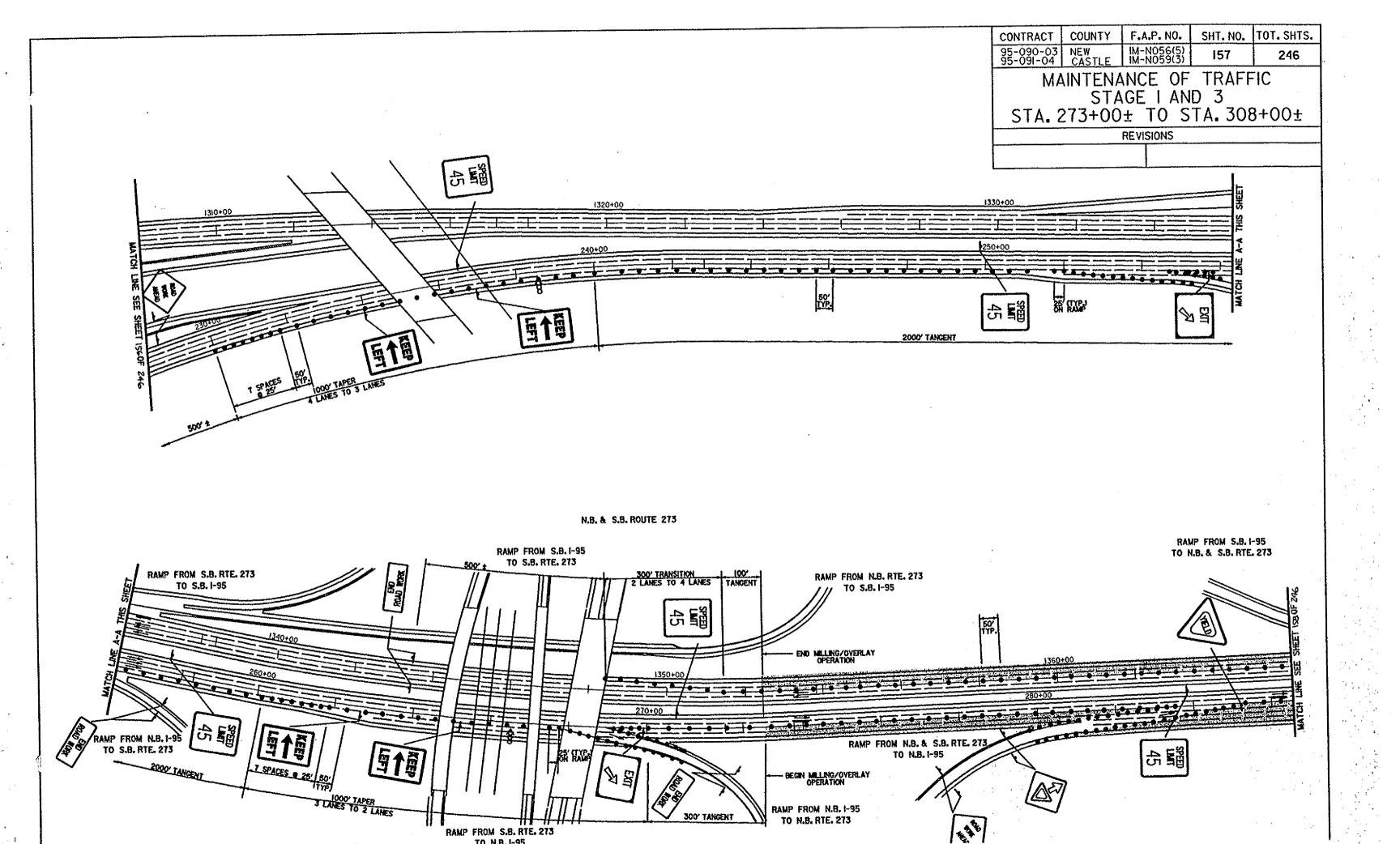


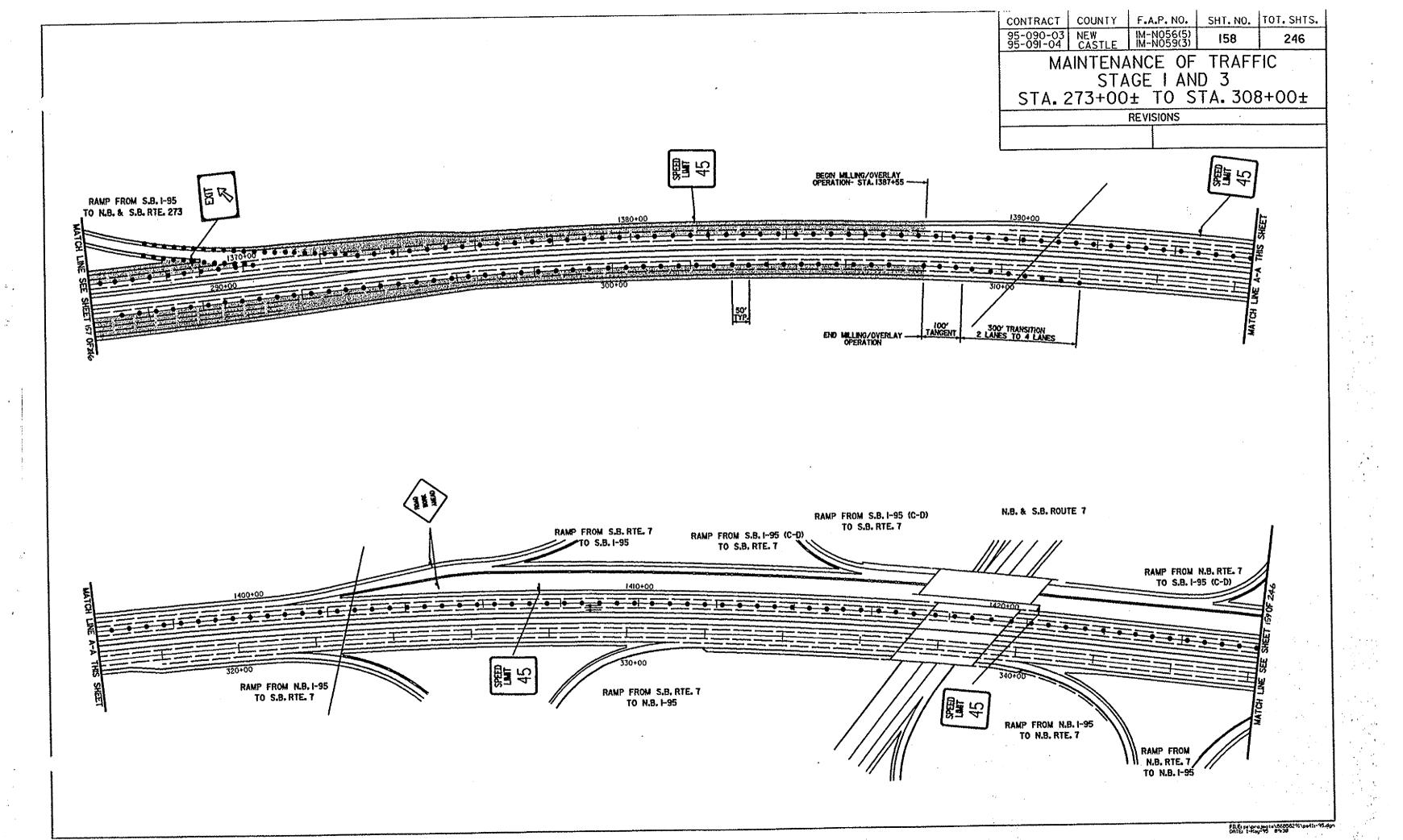
CONTRACT | COUNTY | F.A.P. NO. | SHT. NO. TOT. SHTS. 95-090-03 NEW IM-N056(5) 95-091-04 CASTLE IM-N059(3) MAINTENANCE OF TRAFFIC STAGE 2 AND 4 STA. 238+00± TO STA. 273+00± REVISIONS 5輻 1000' TAPER - 4 LANES TO 3 LANES

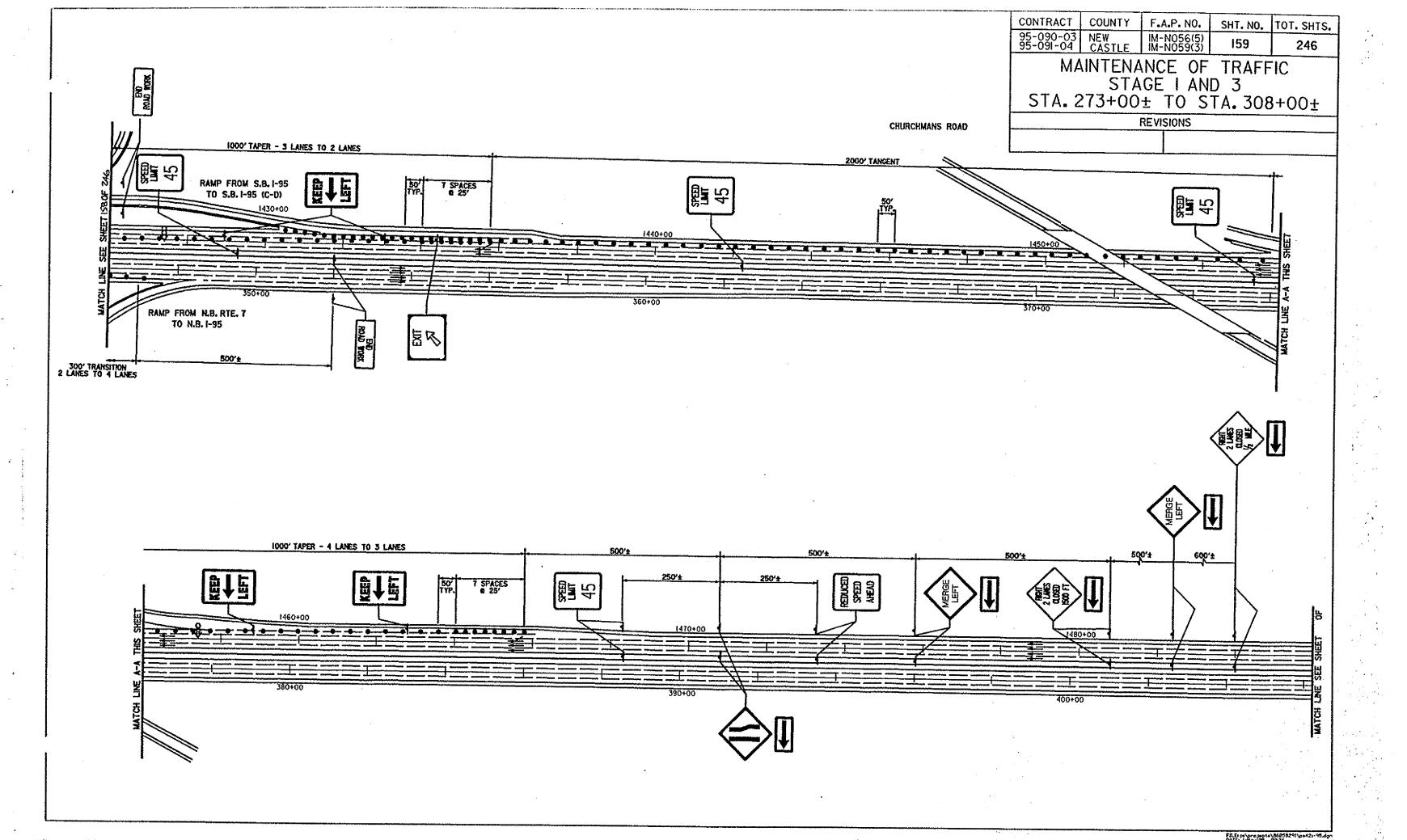


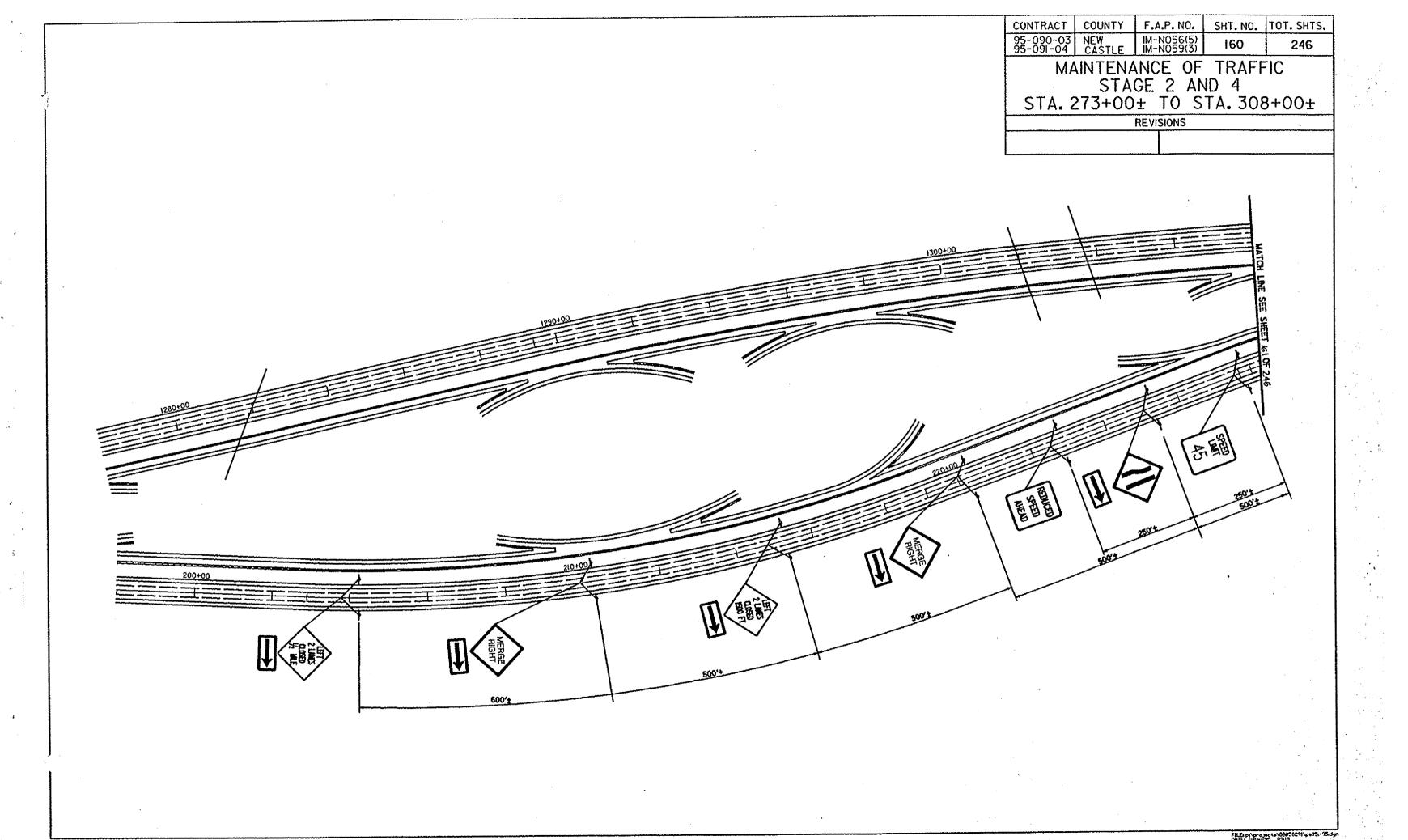


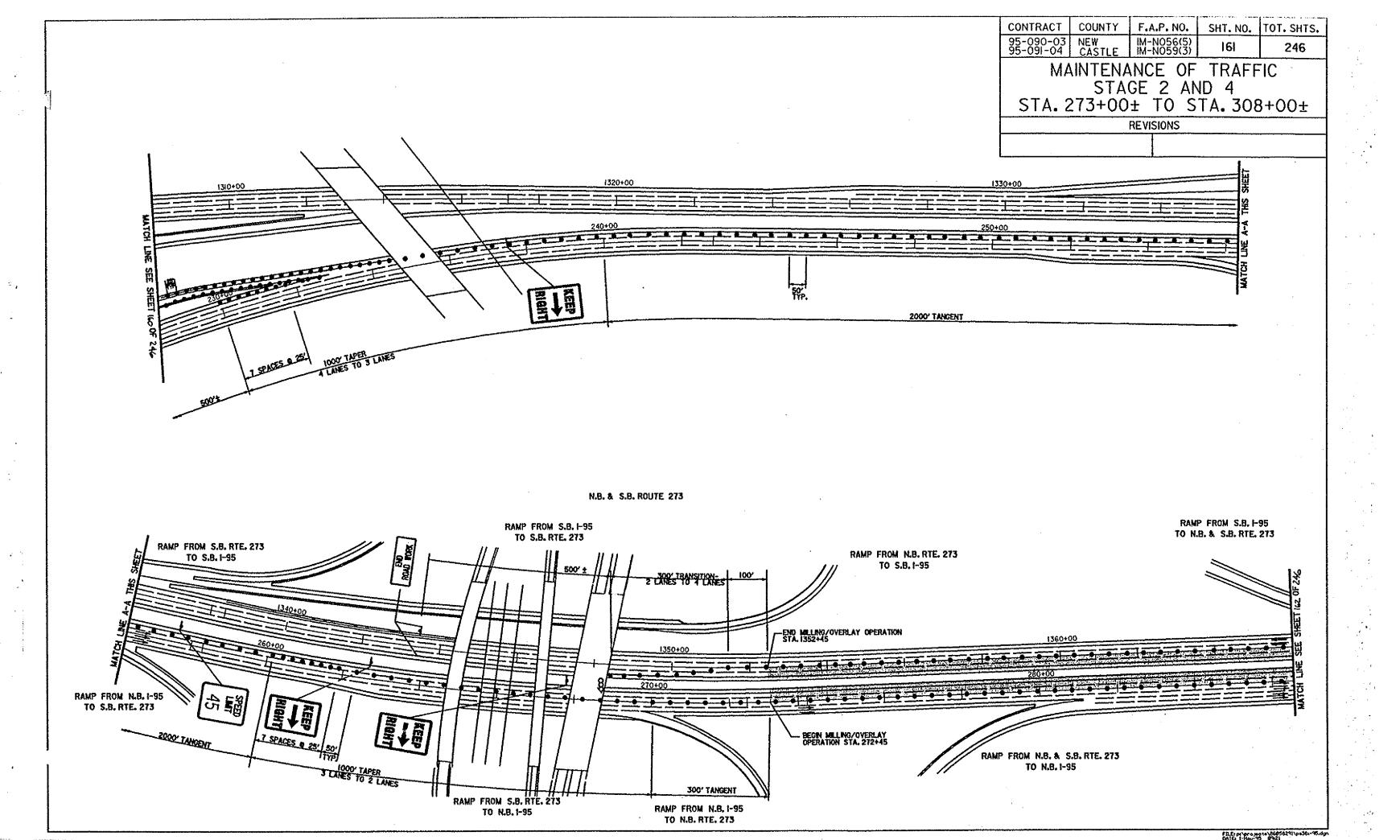


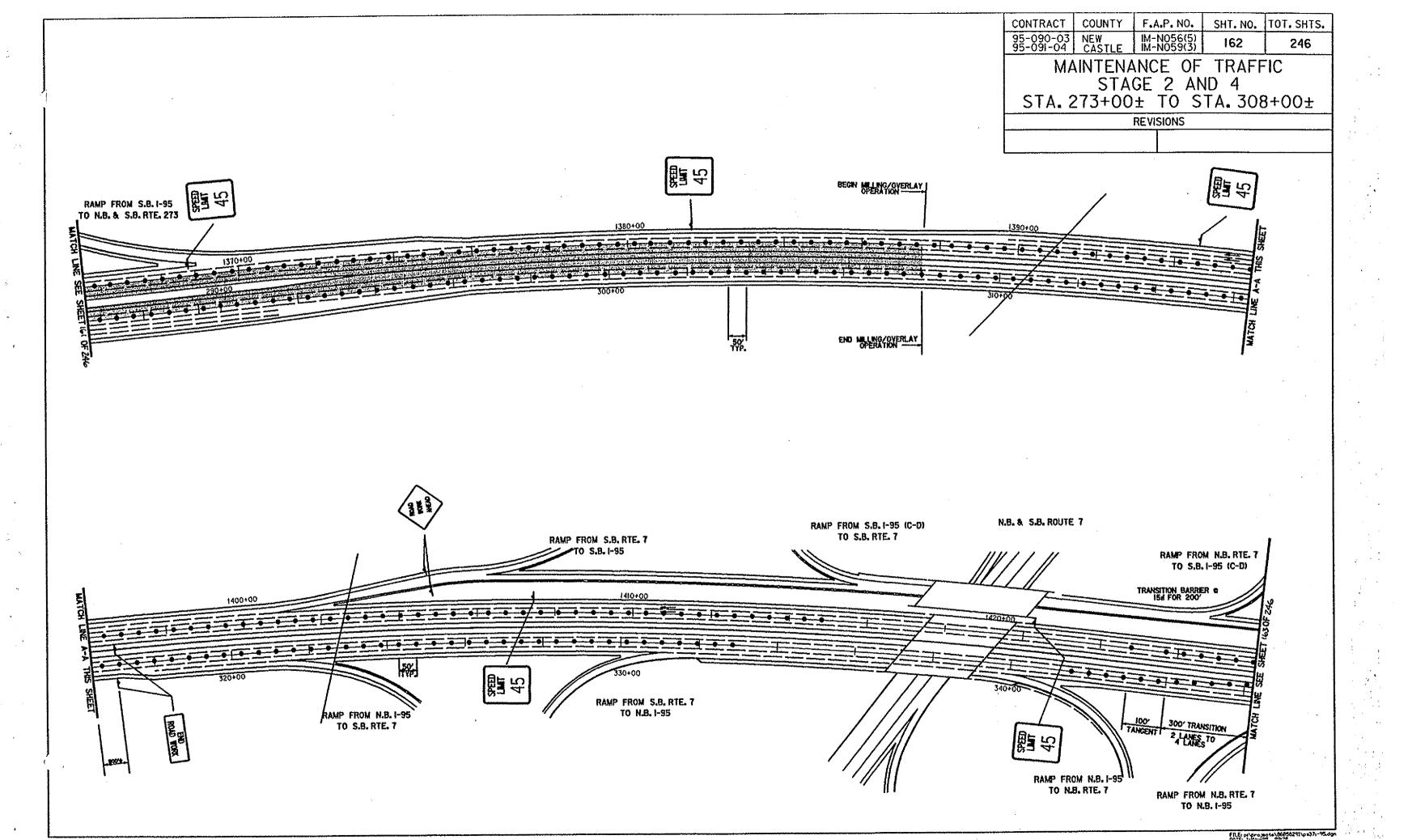


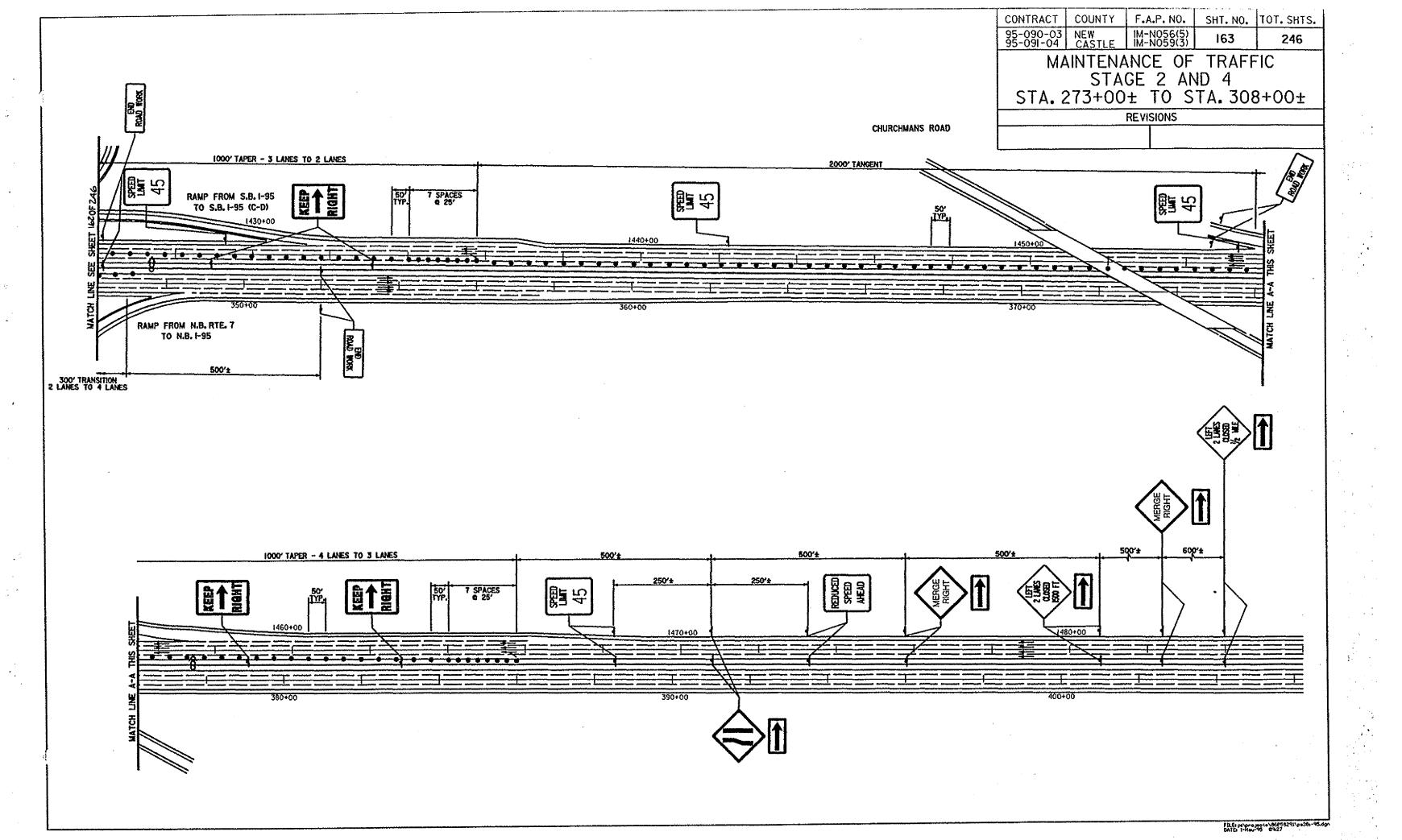


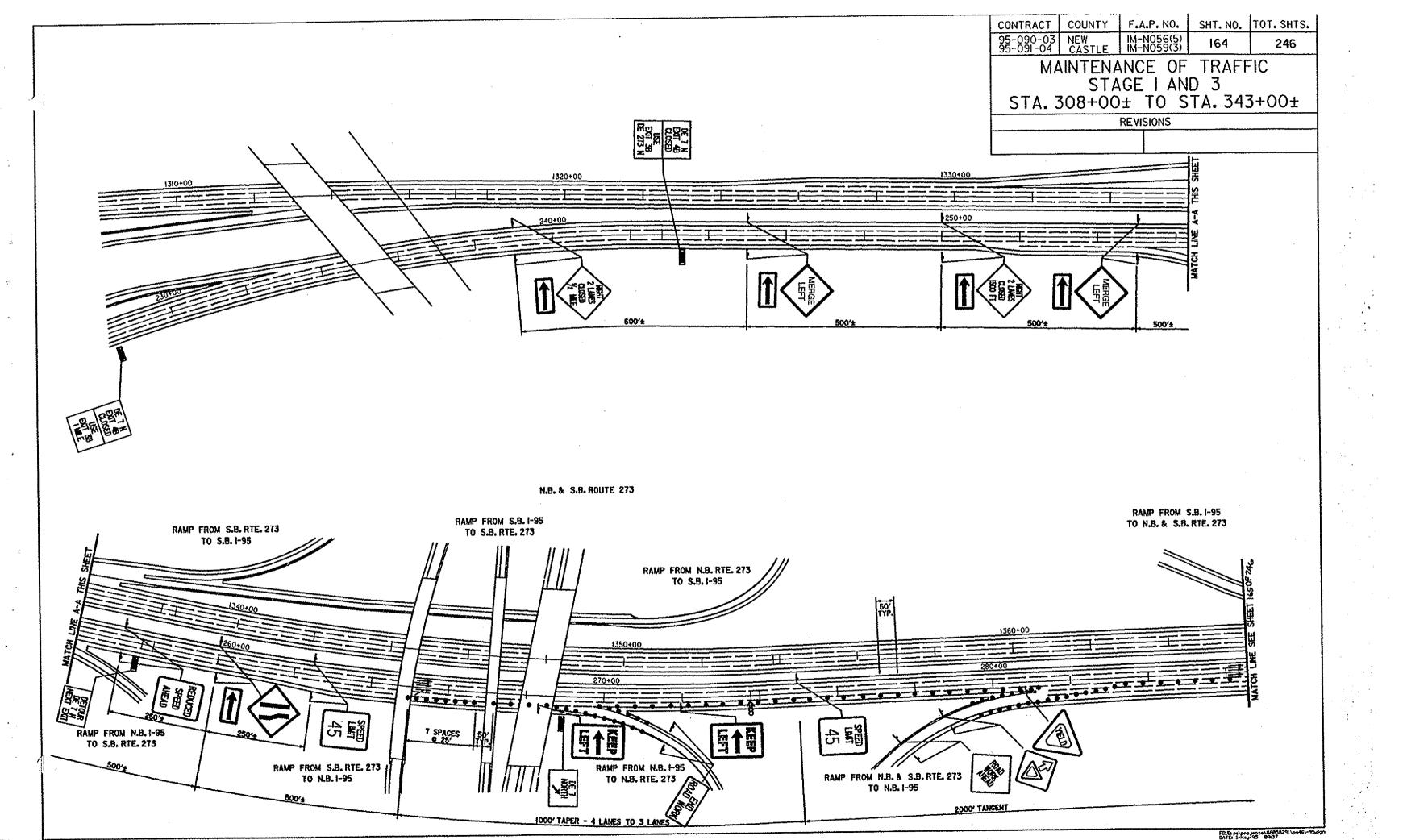


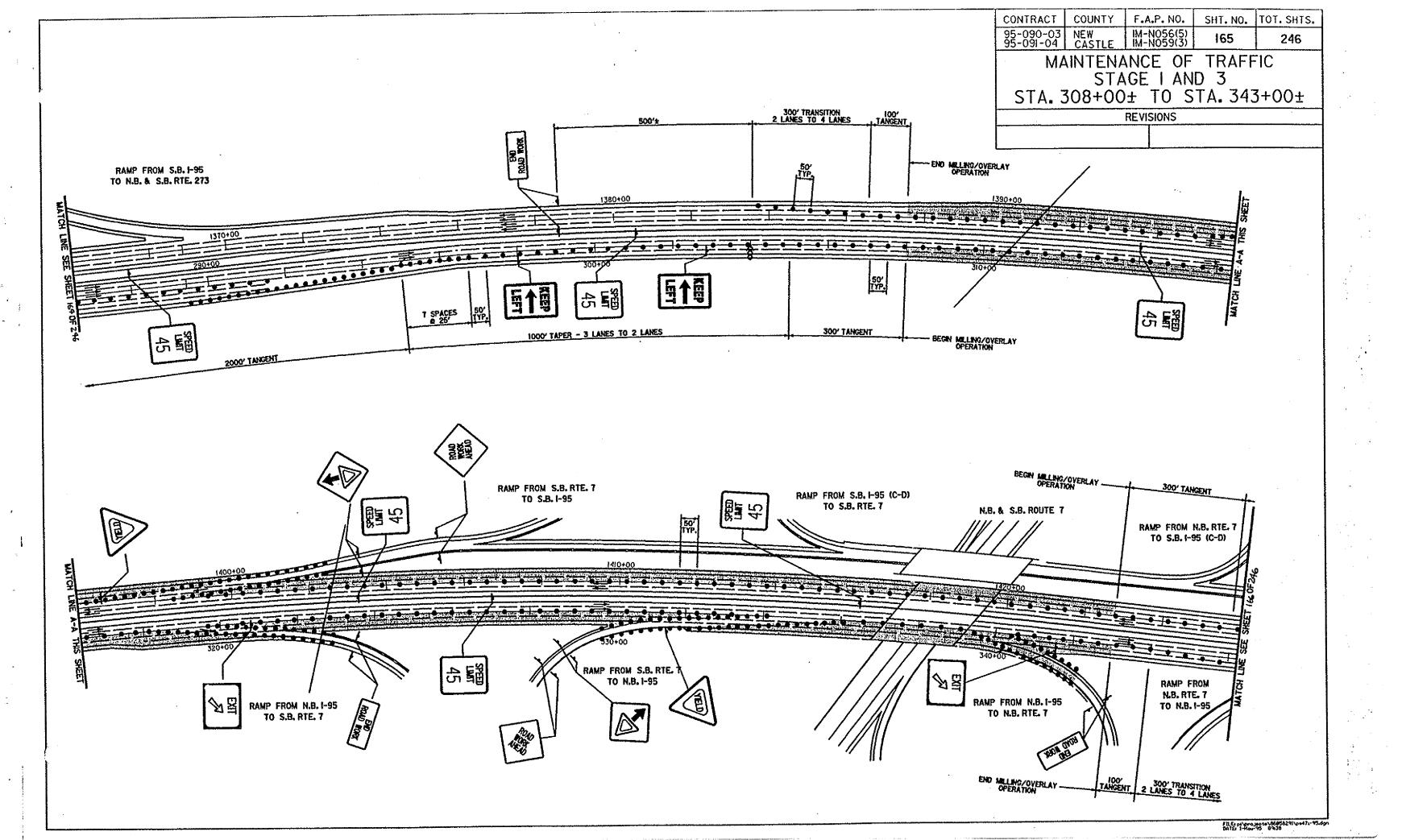


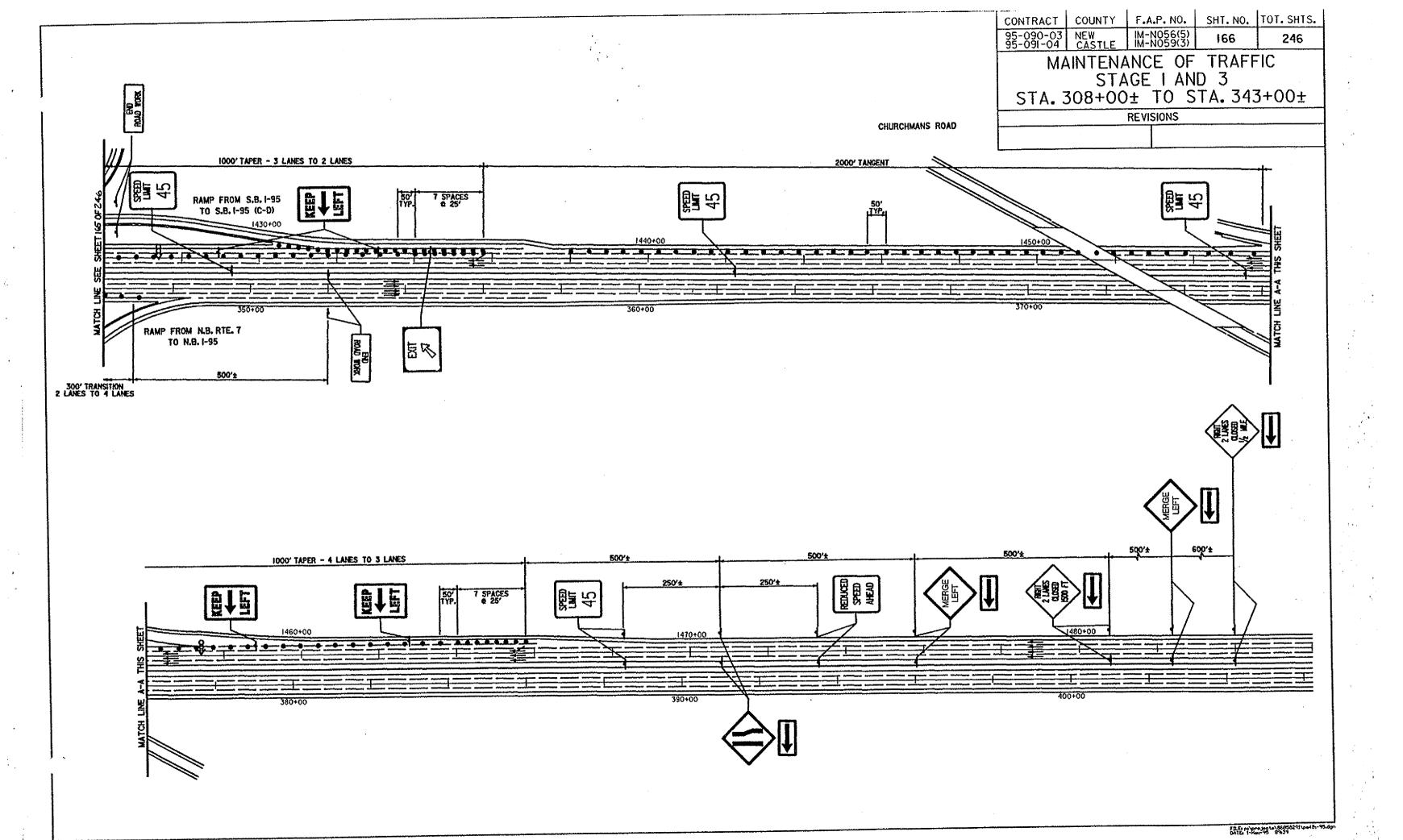


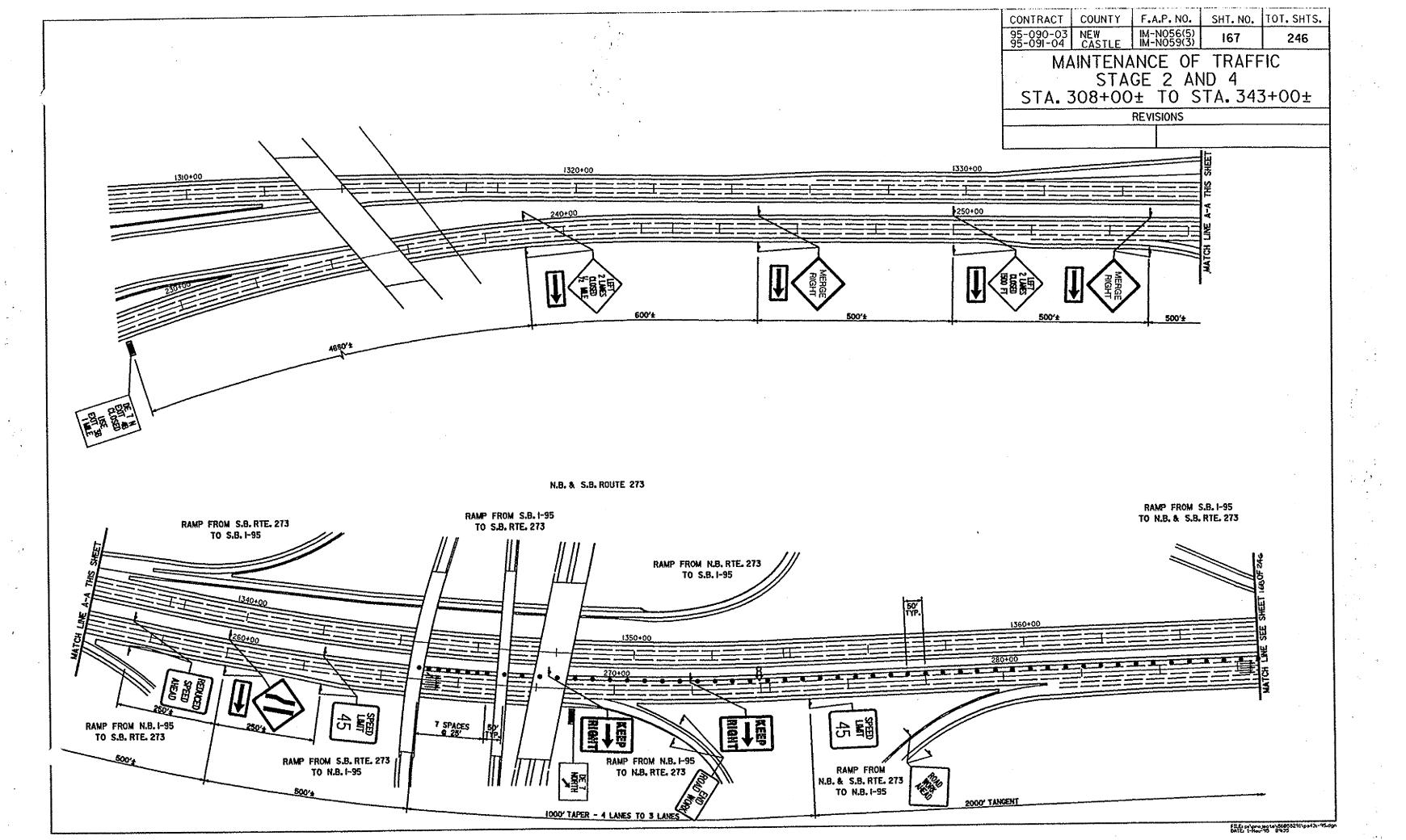


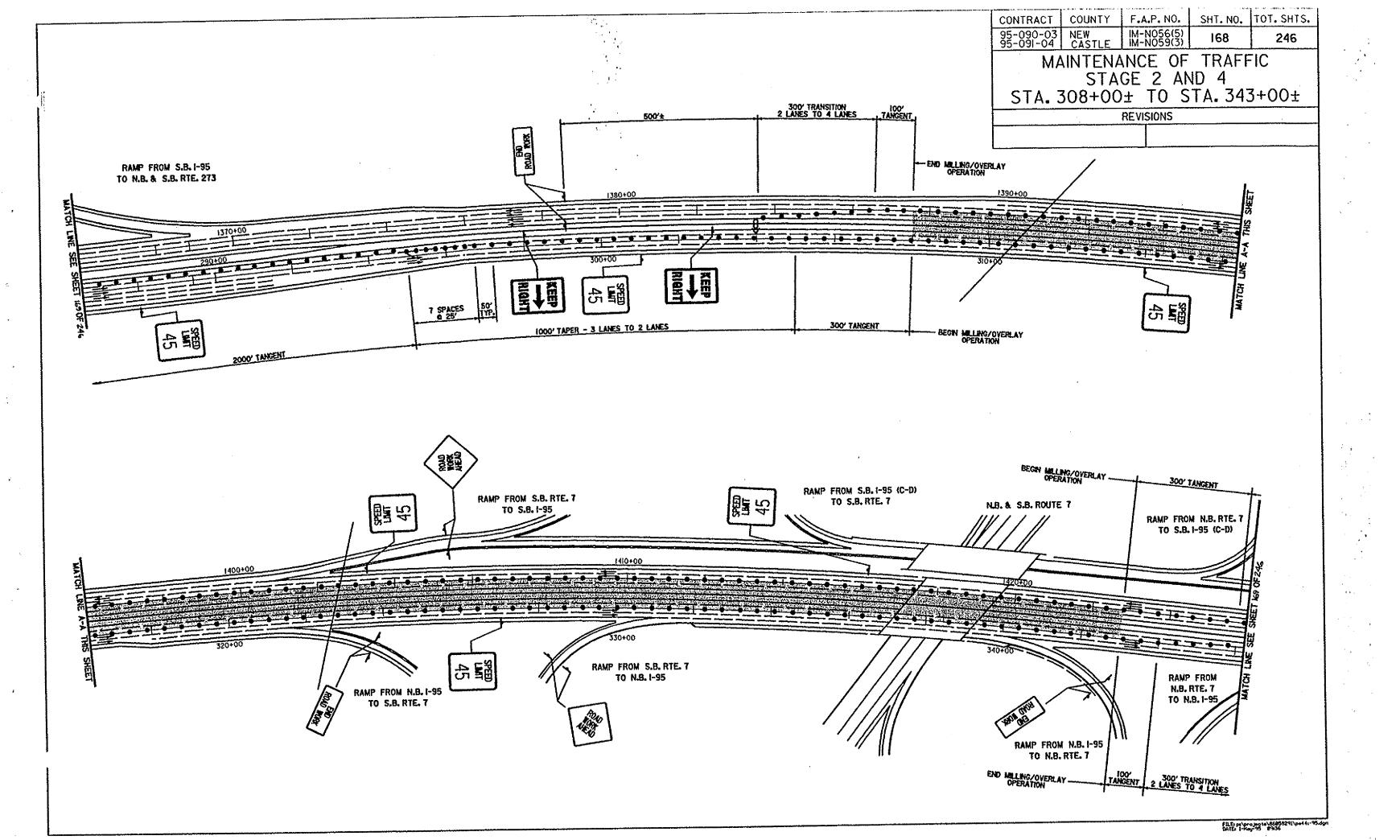


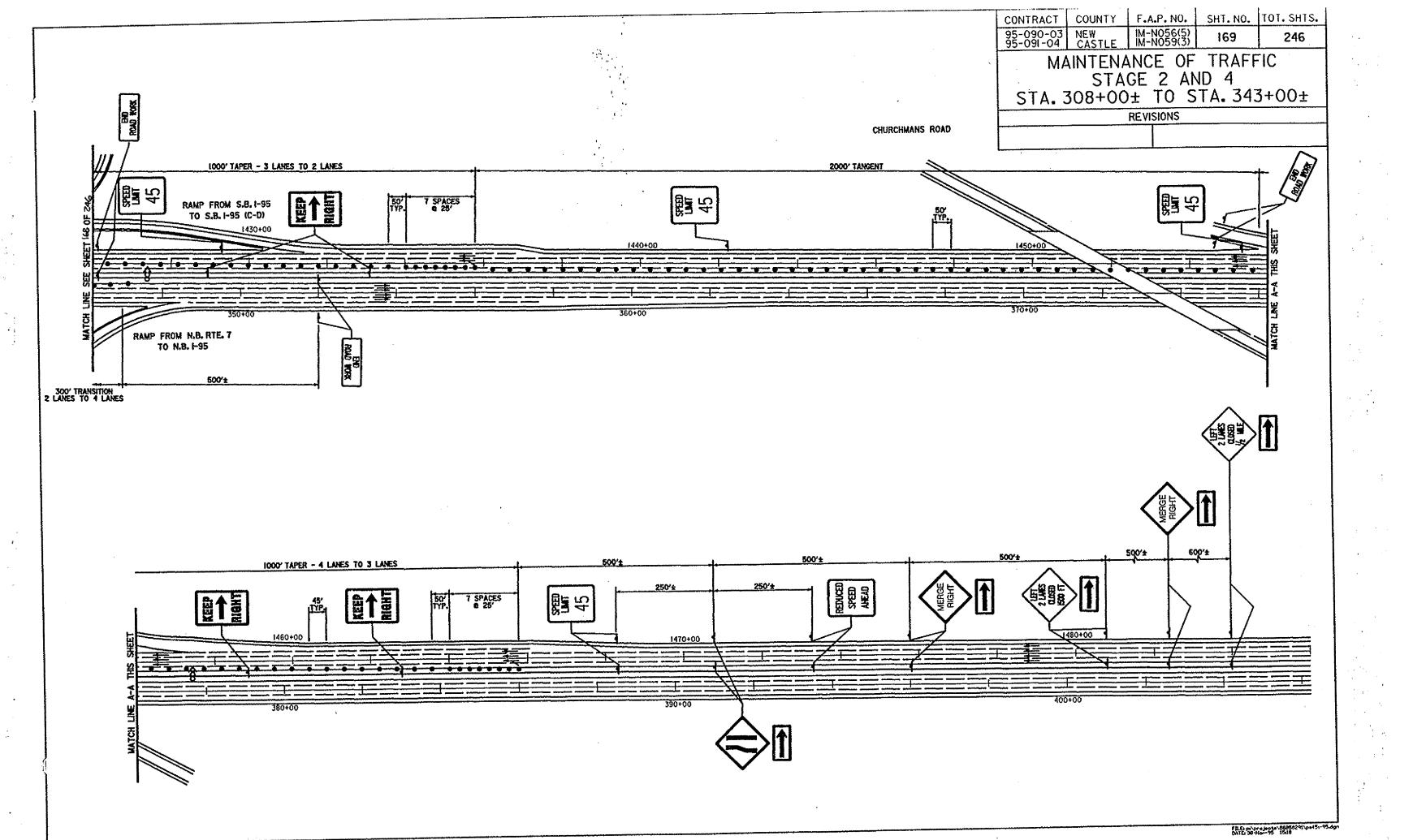


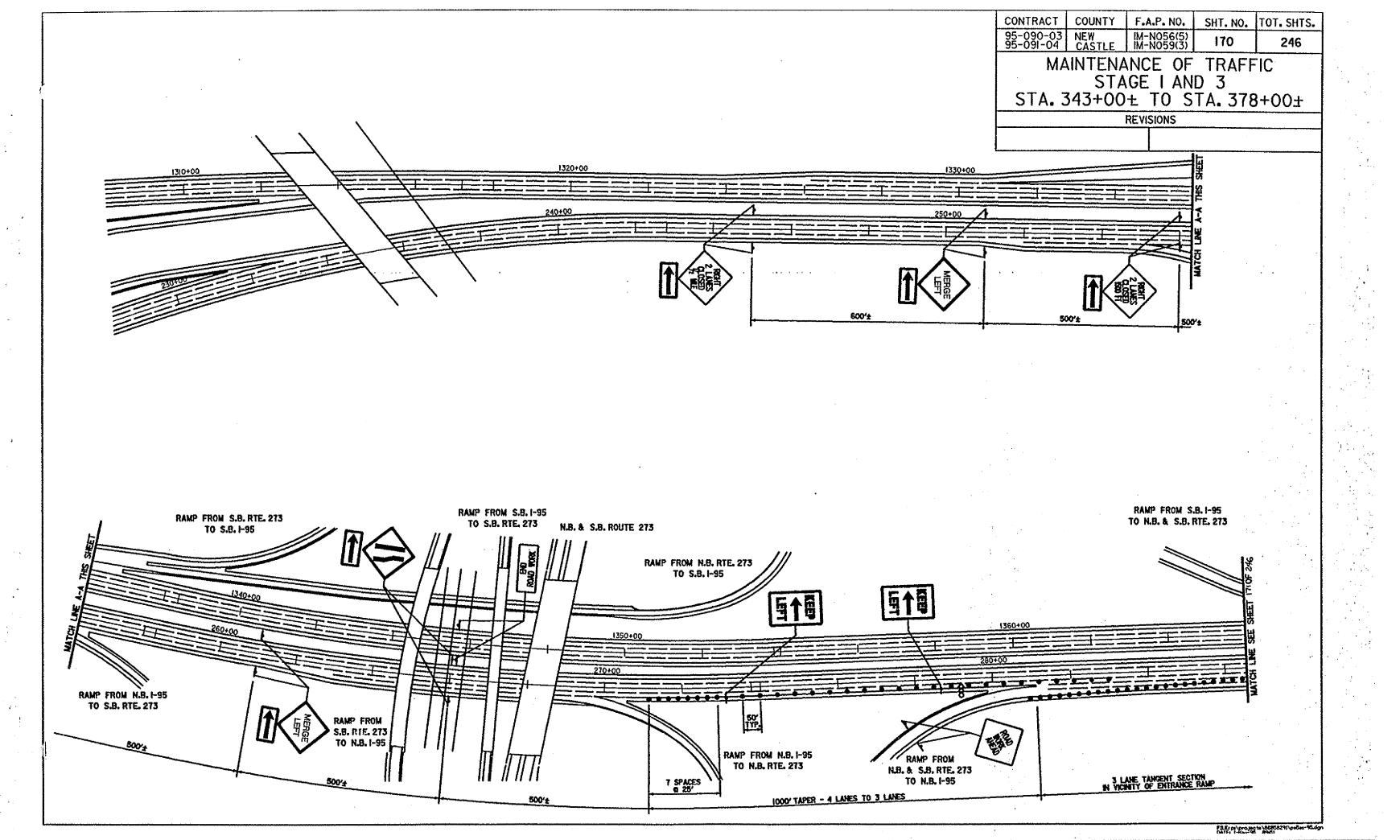


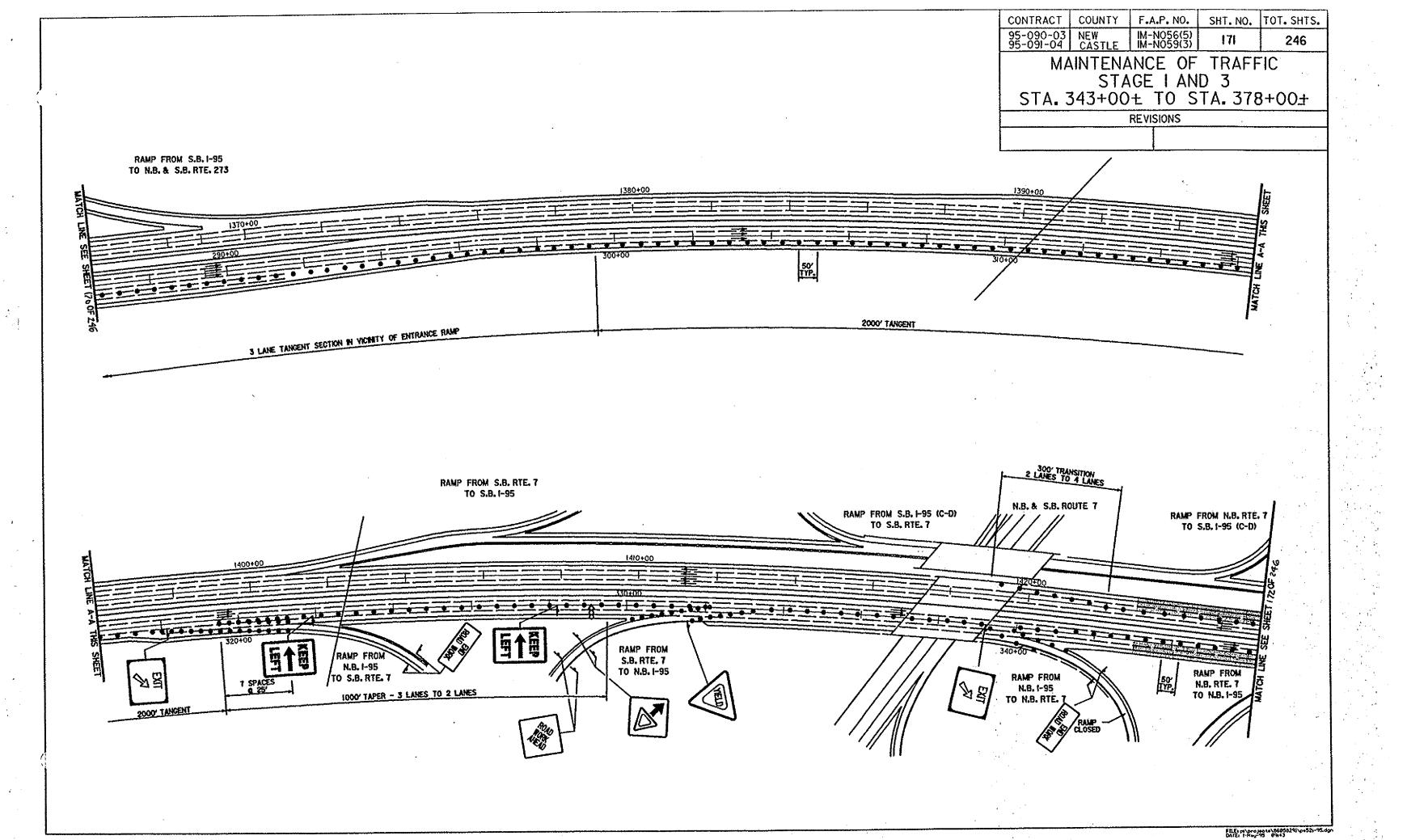


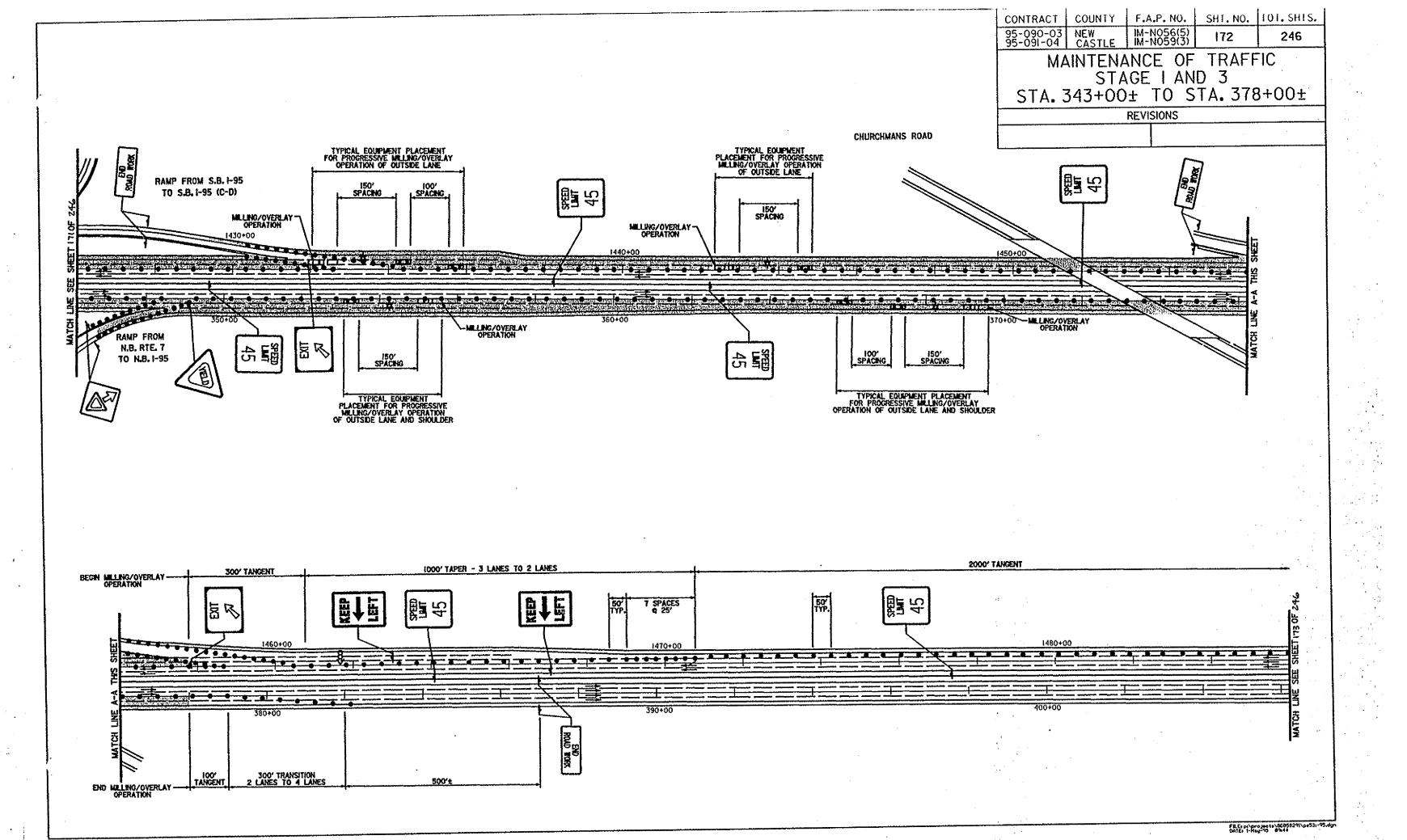


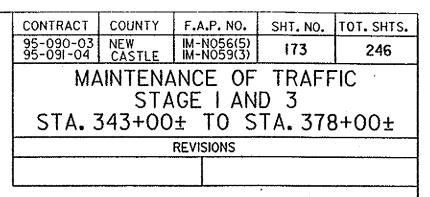


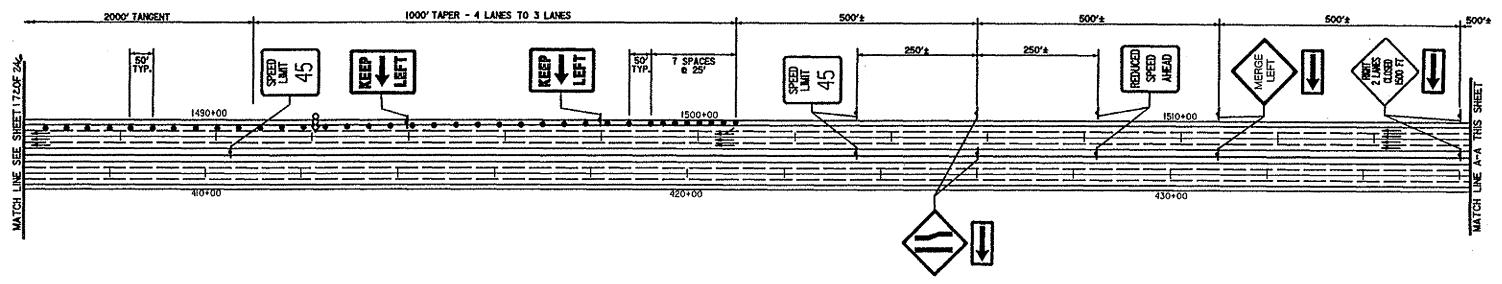


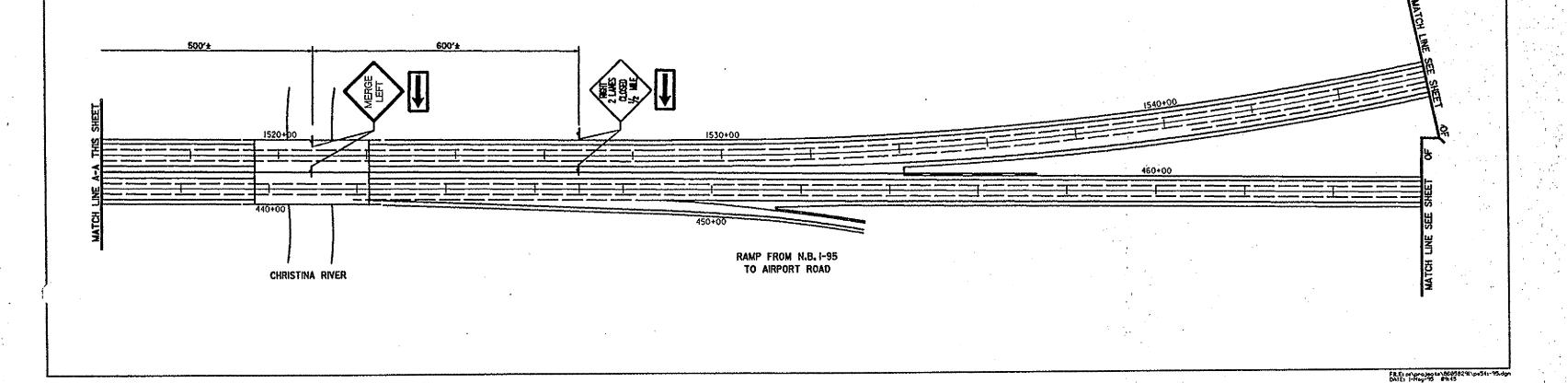


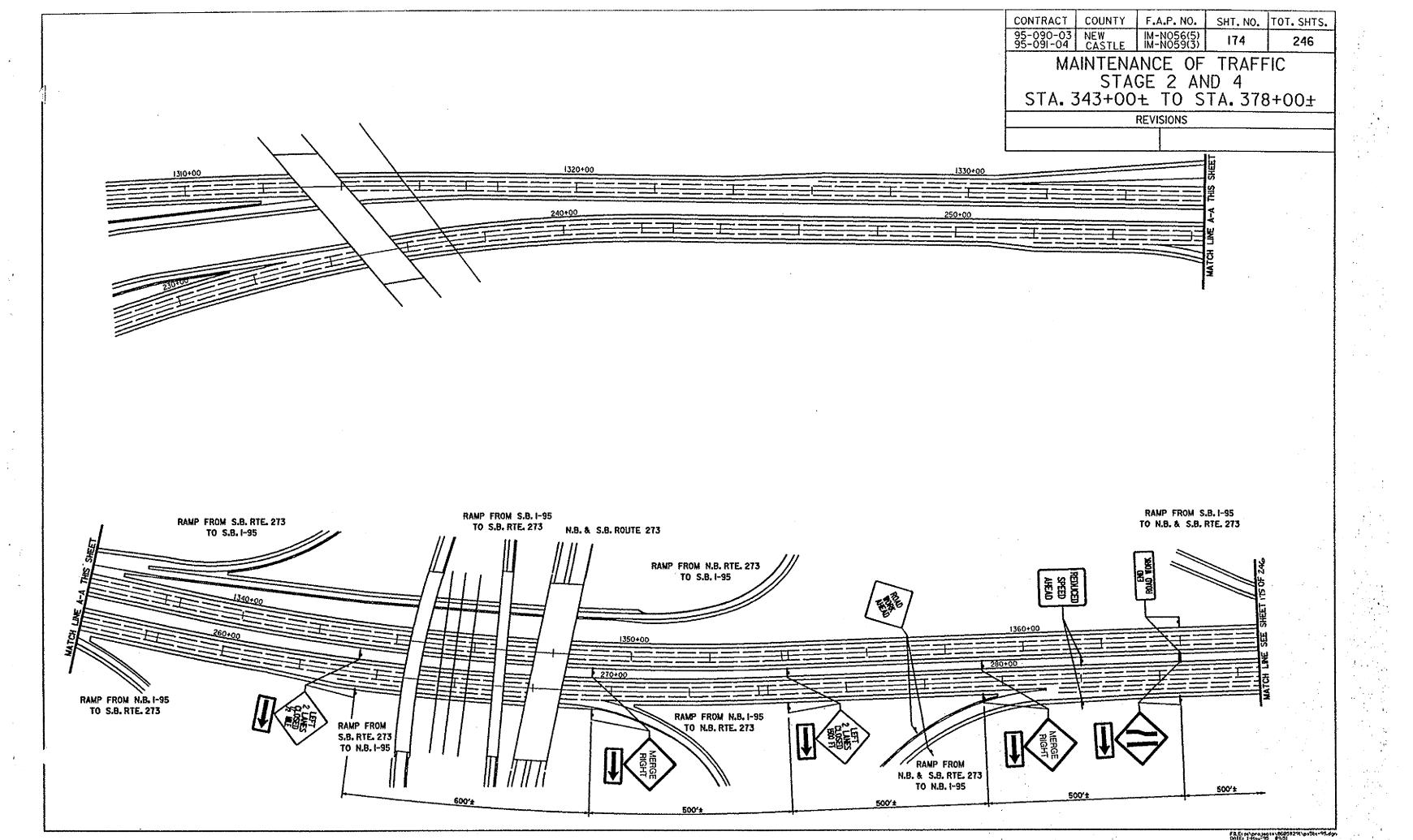


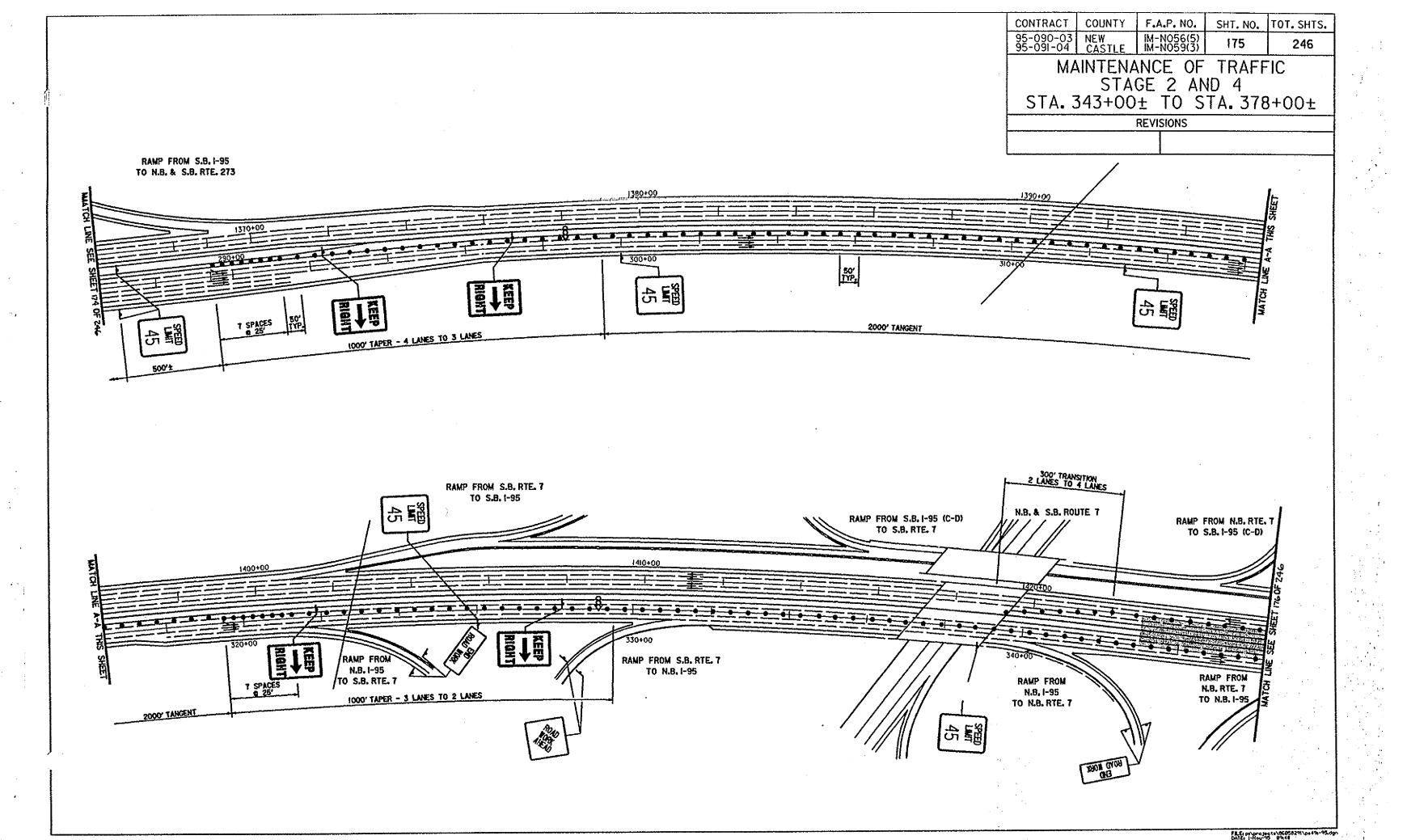


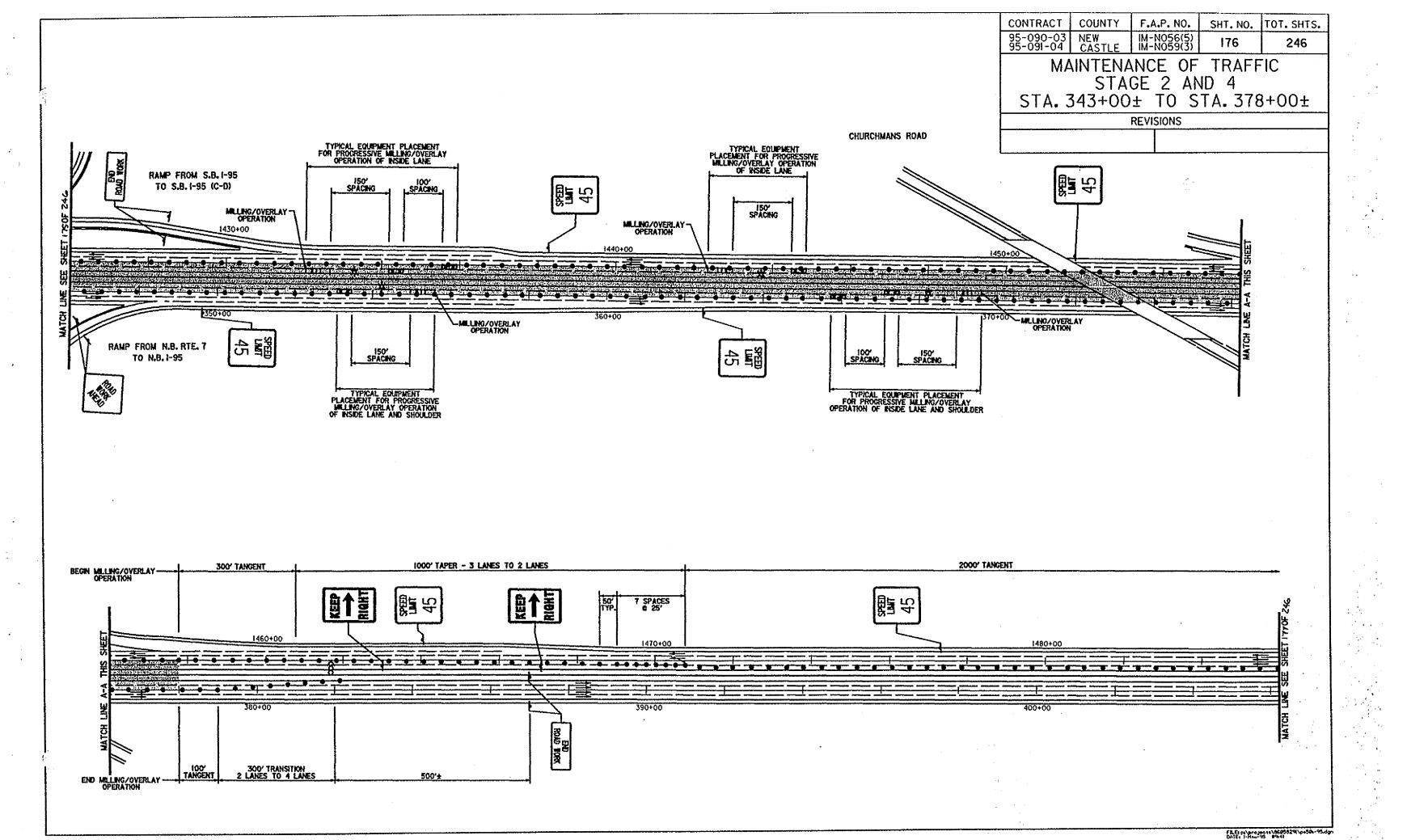


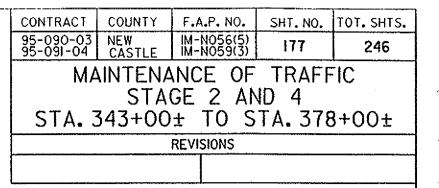


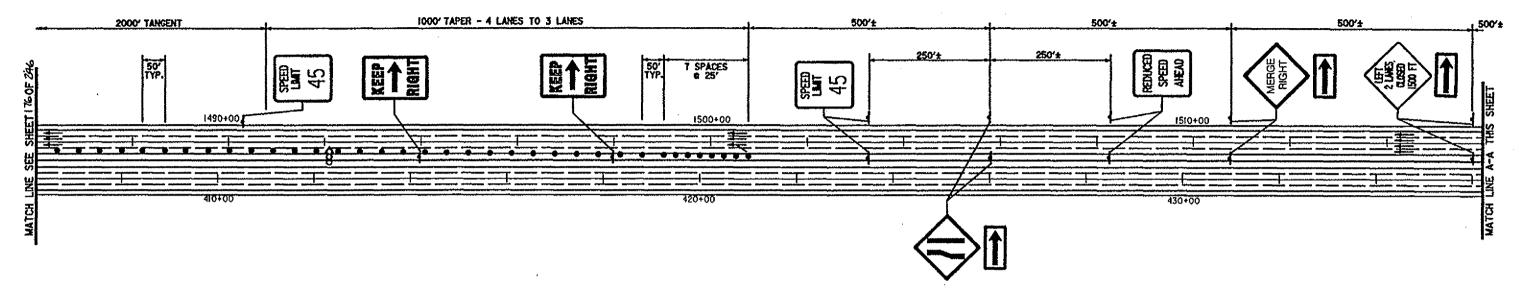


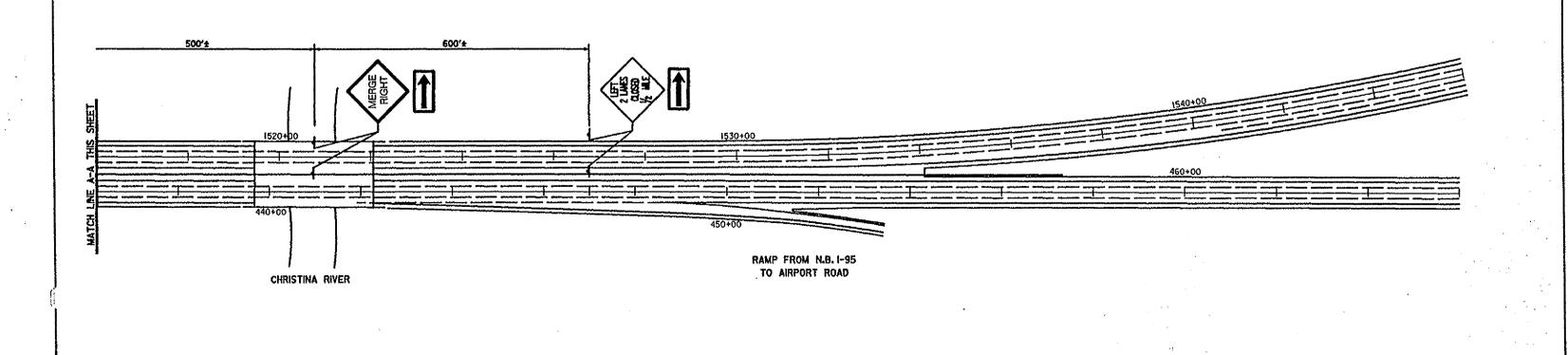


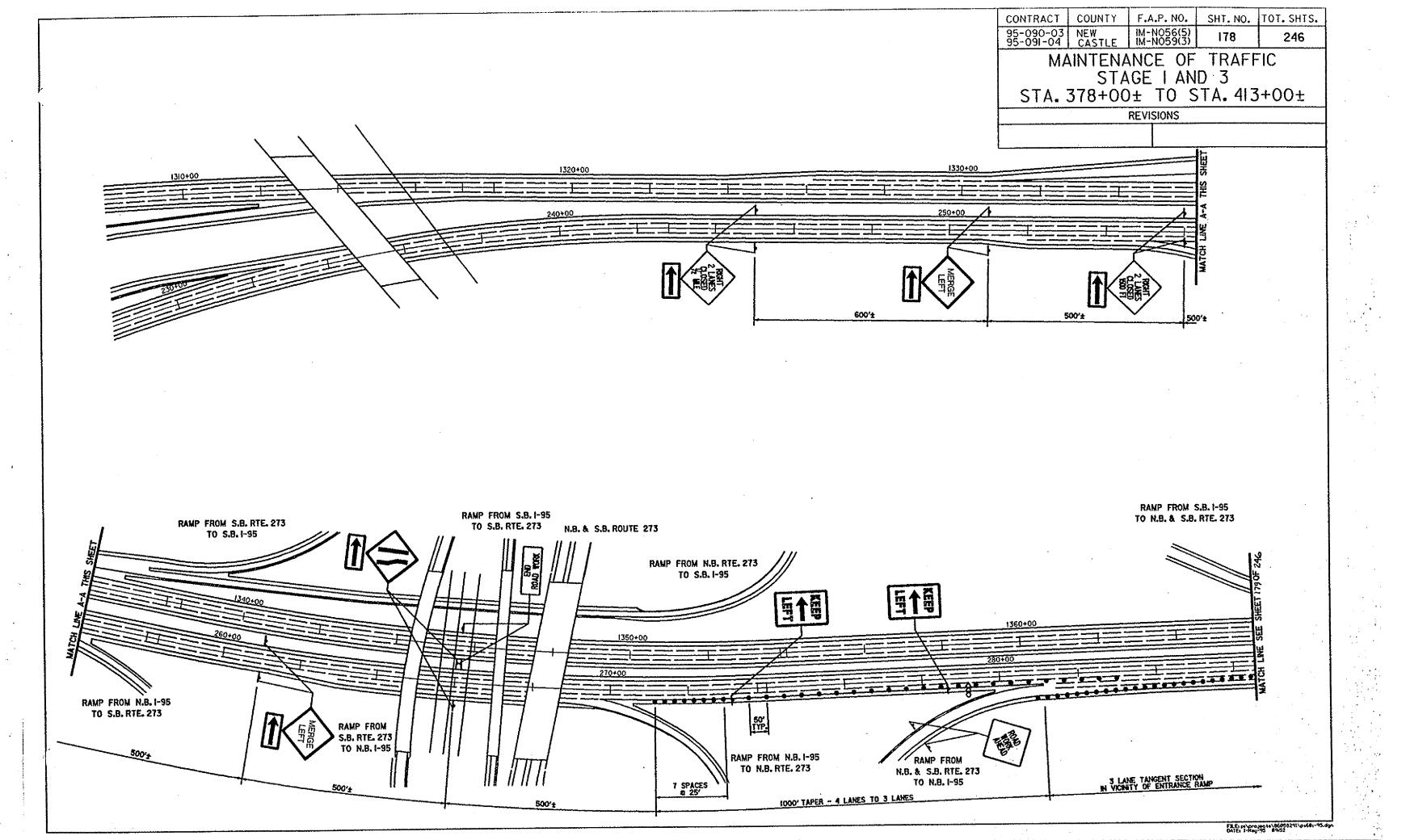


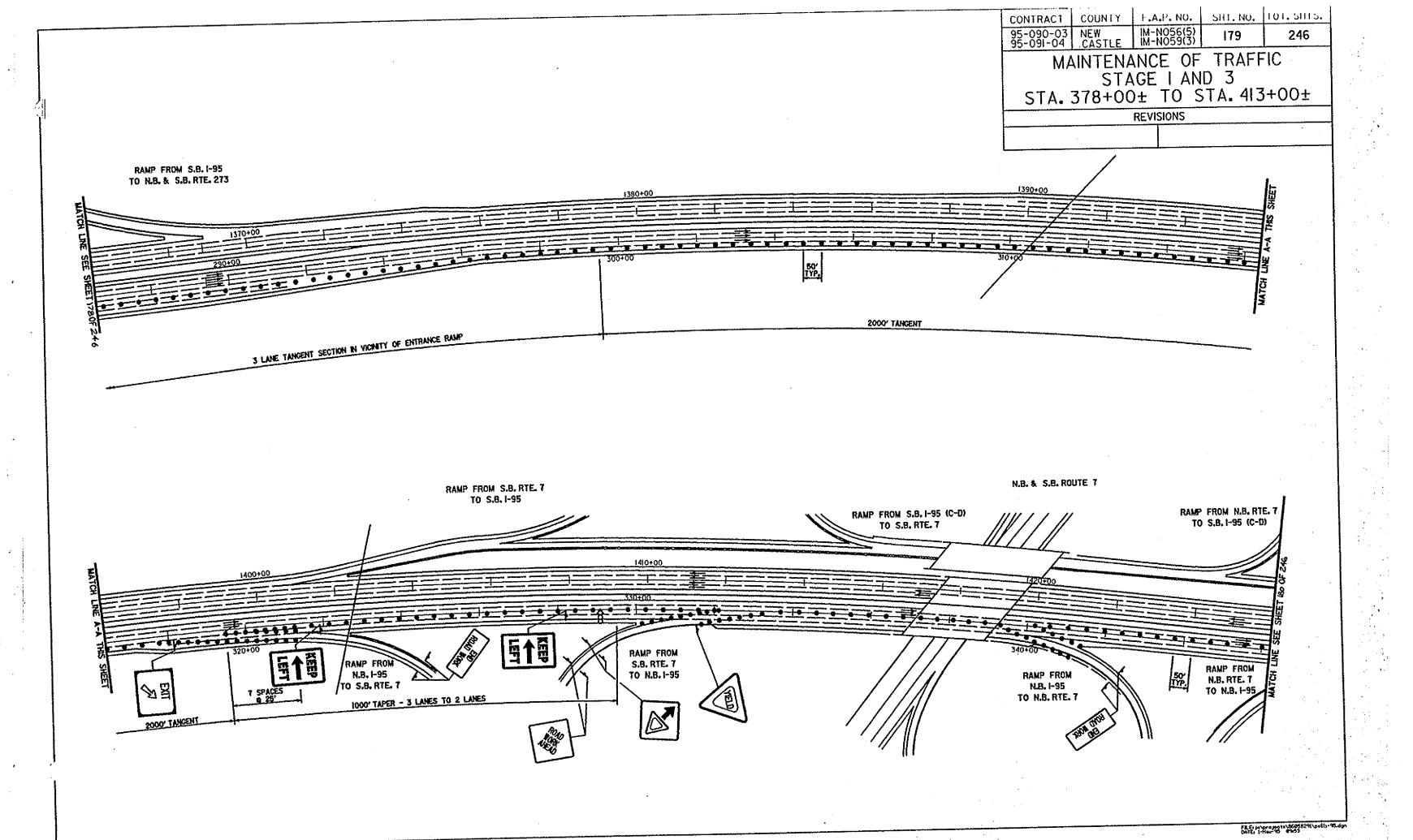


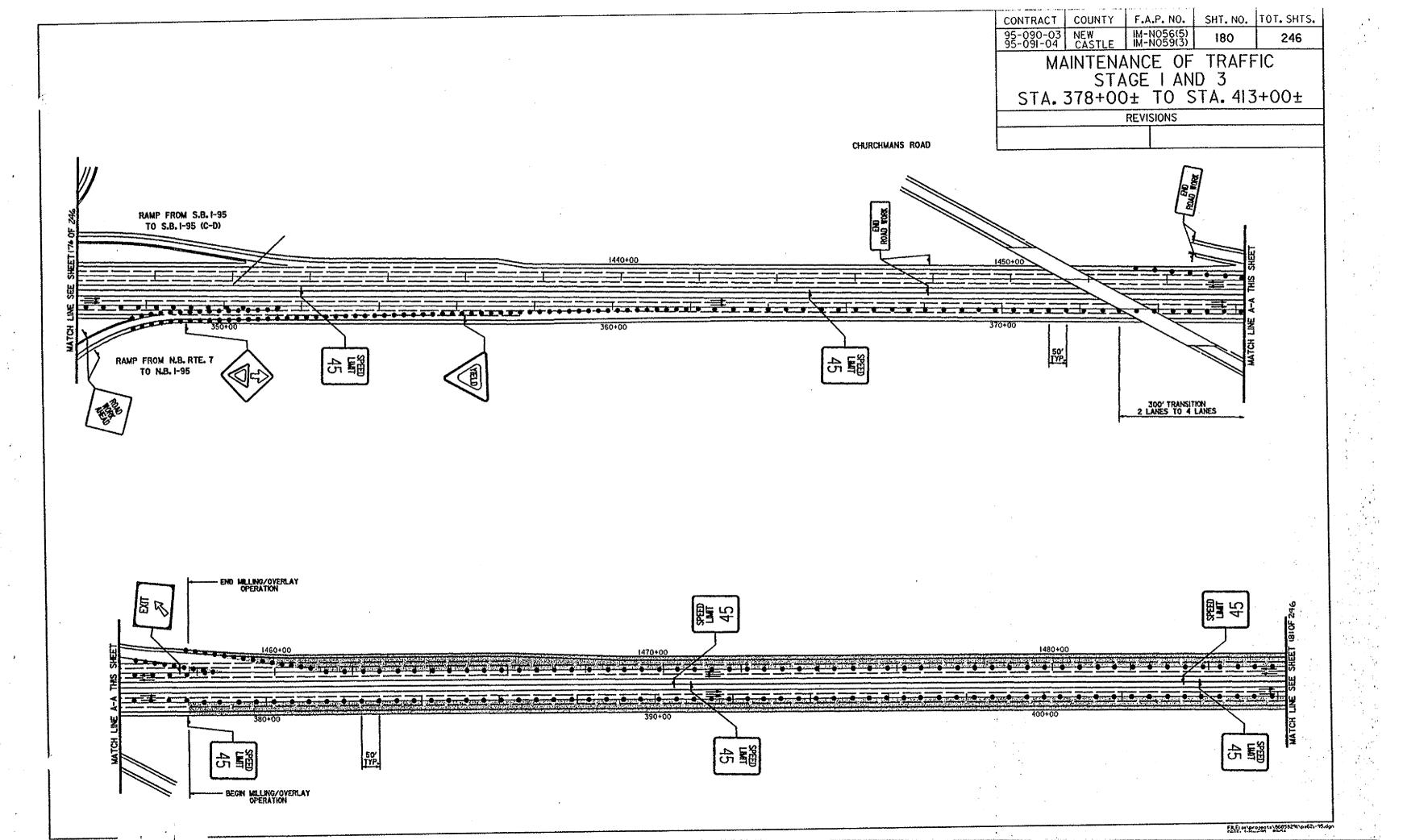












CONTRACT COUNTY F.A.P. NO. SHT. NO. TOT. SHTS.

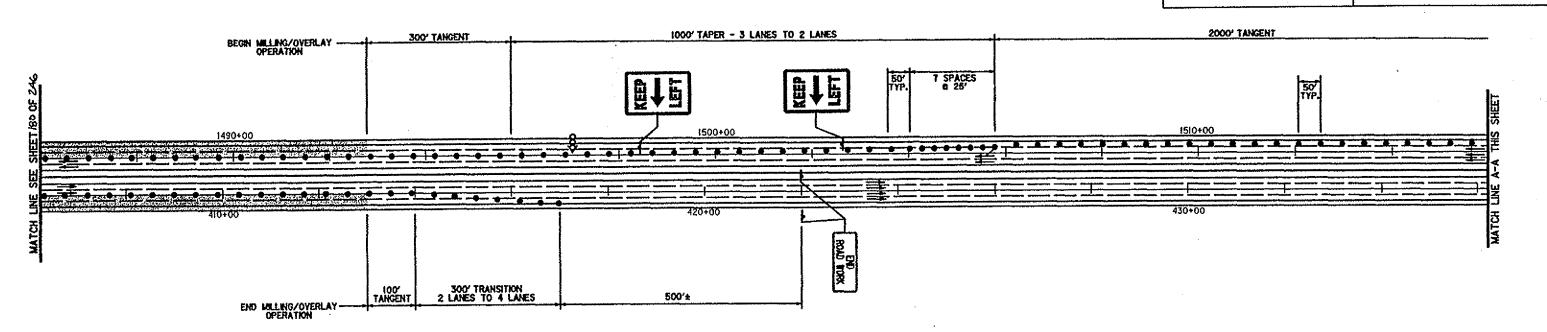
95-090-03 NEW IM-N056(5) I8I 246

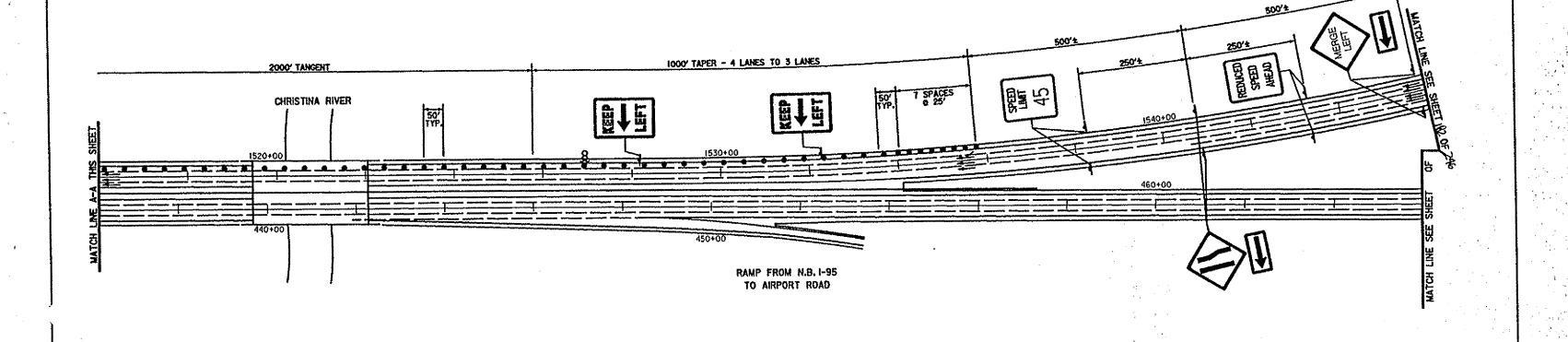
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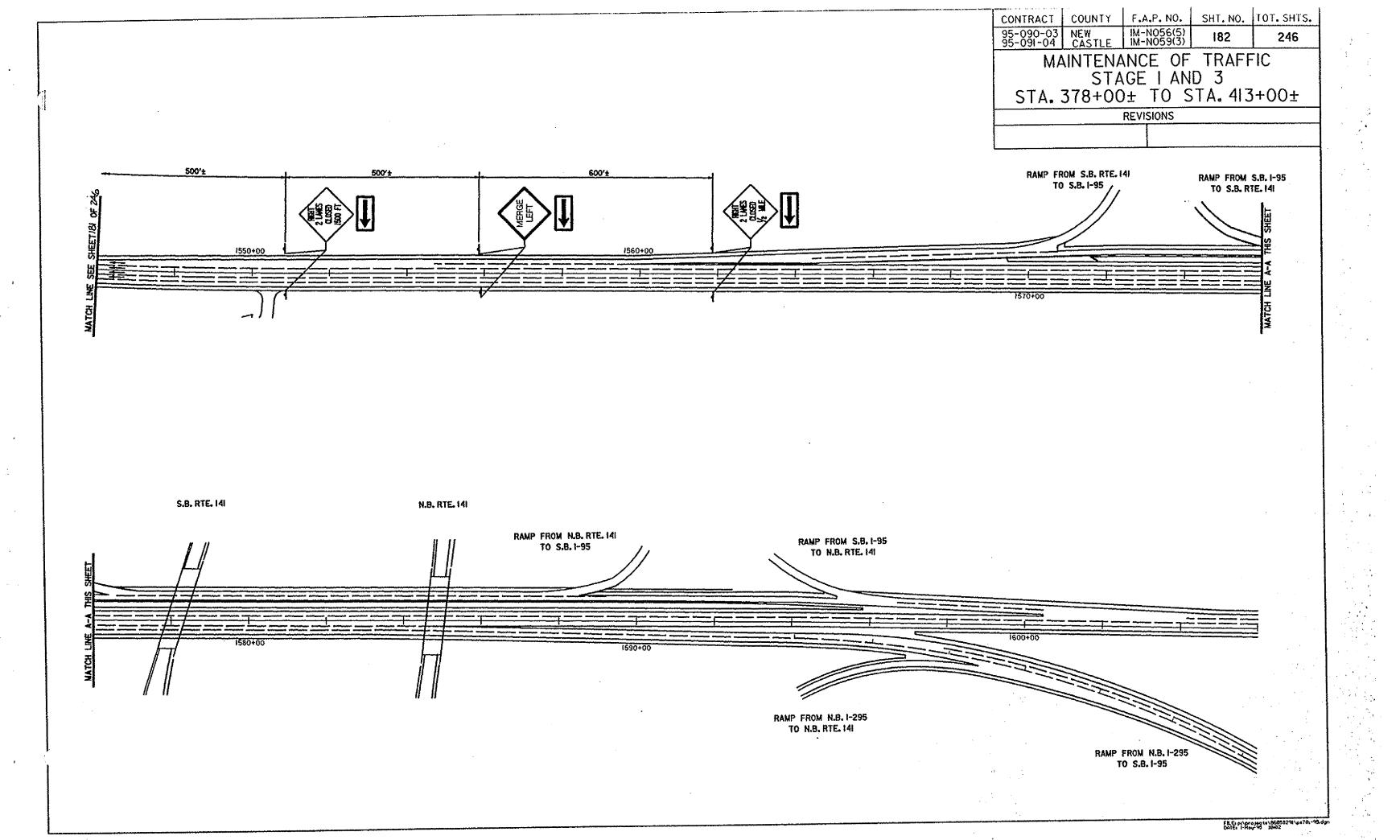
STAGE I AND 3

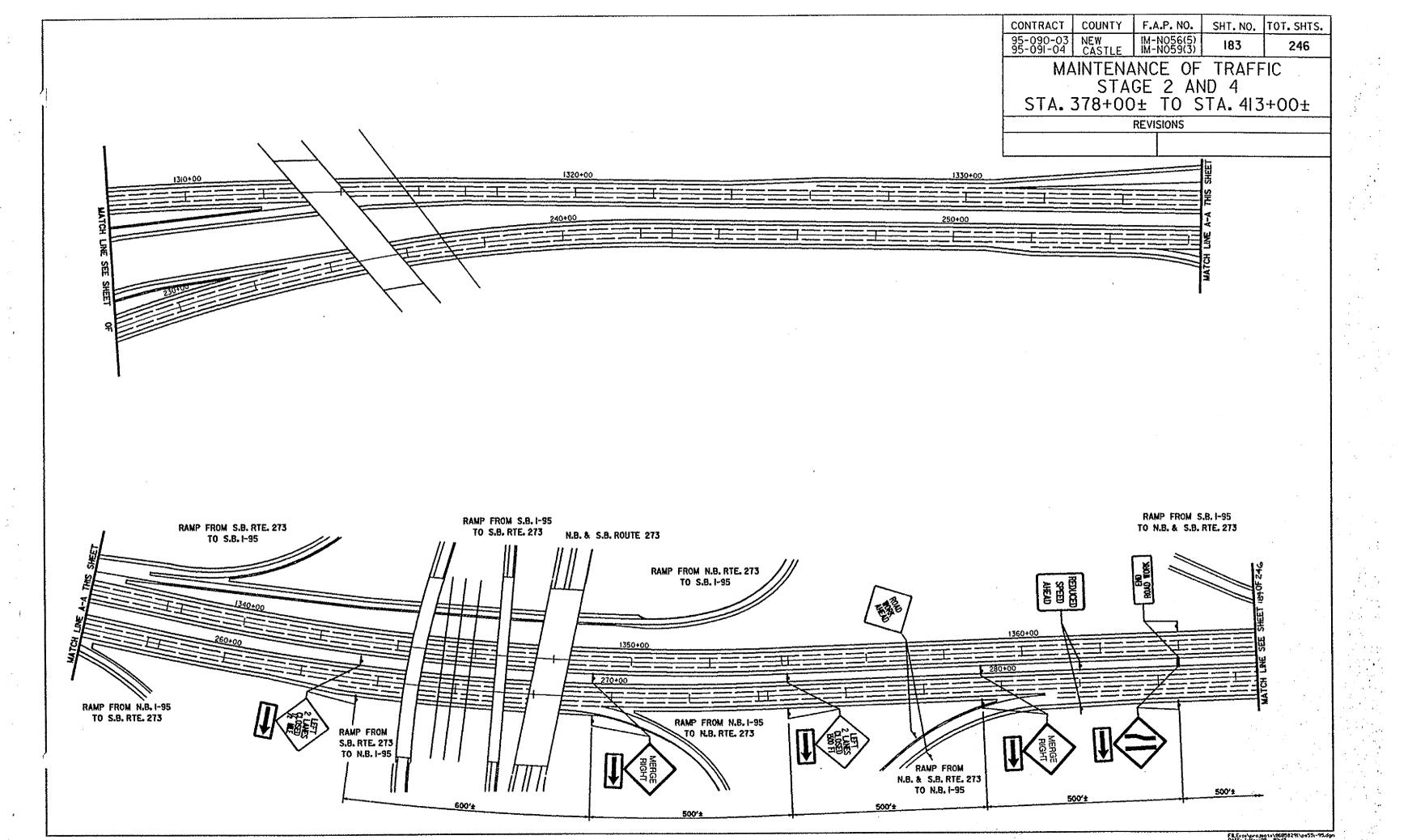
STA. 378+00± TO STA. 413+00±

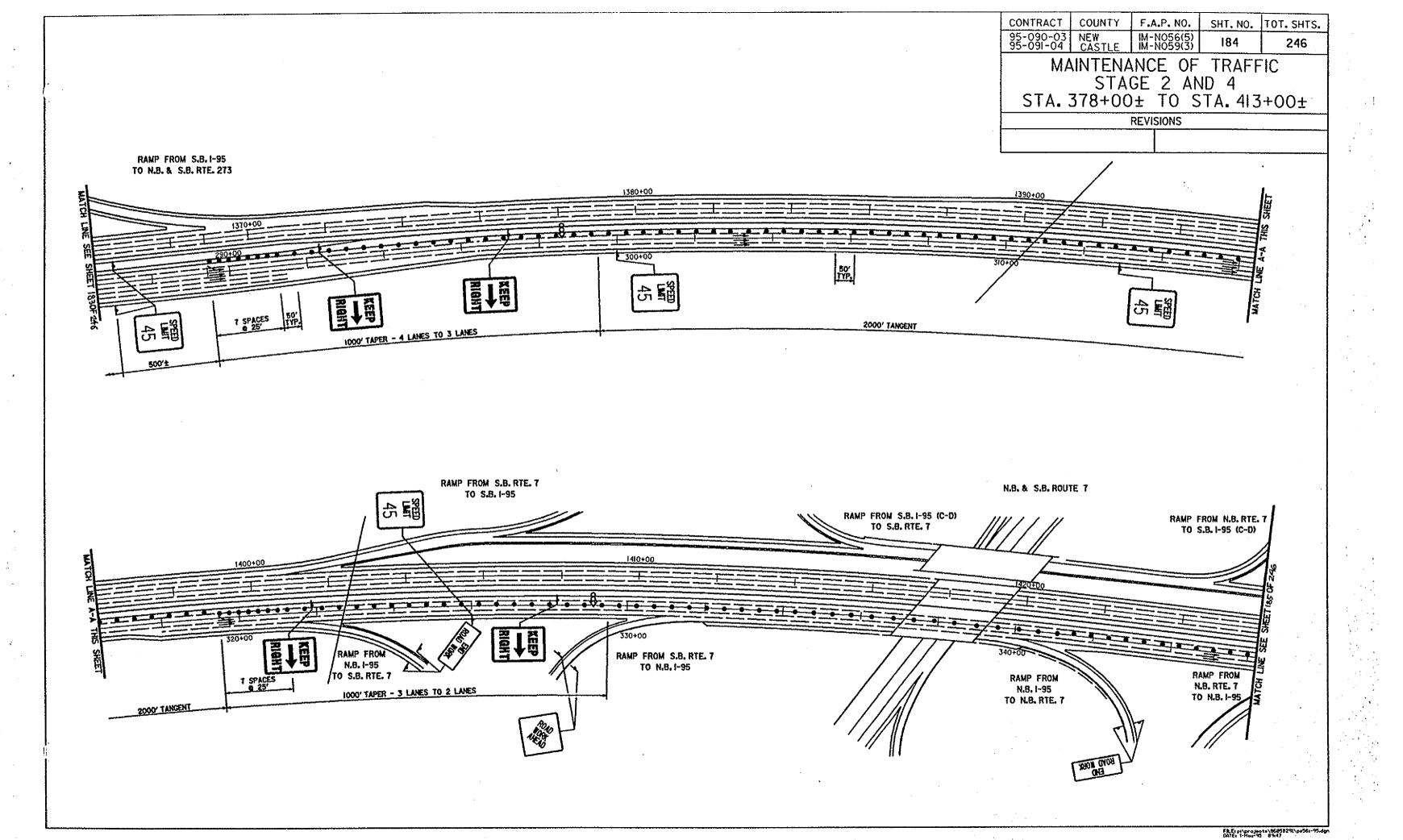
REVISIONS

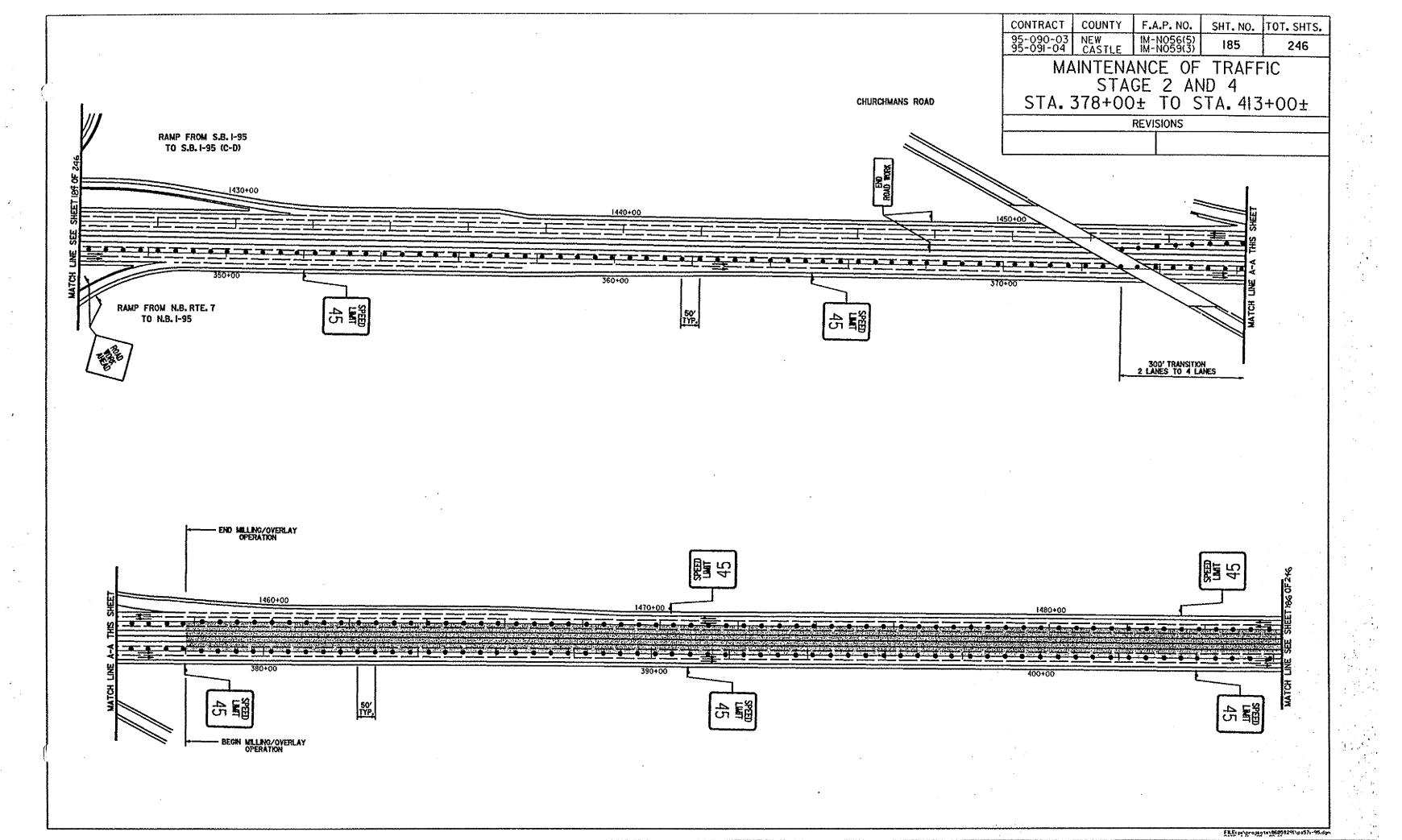


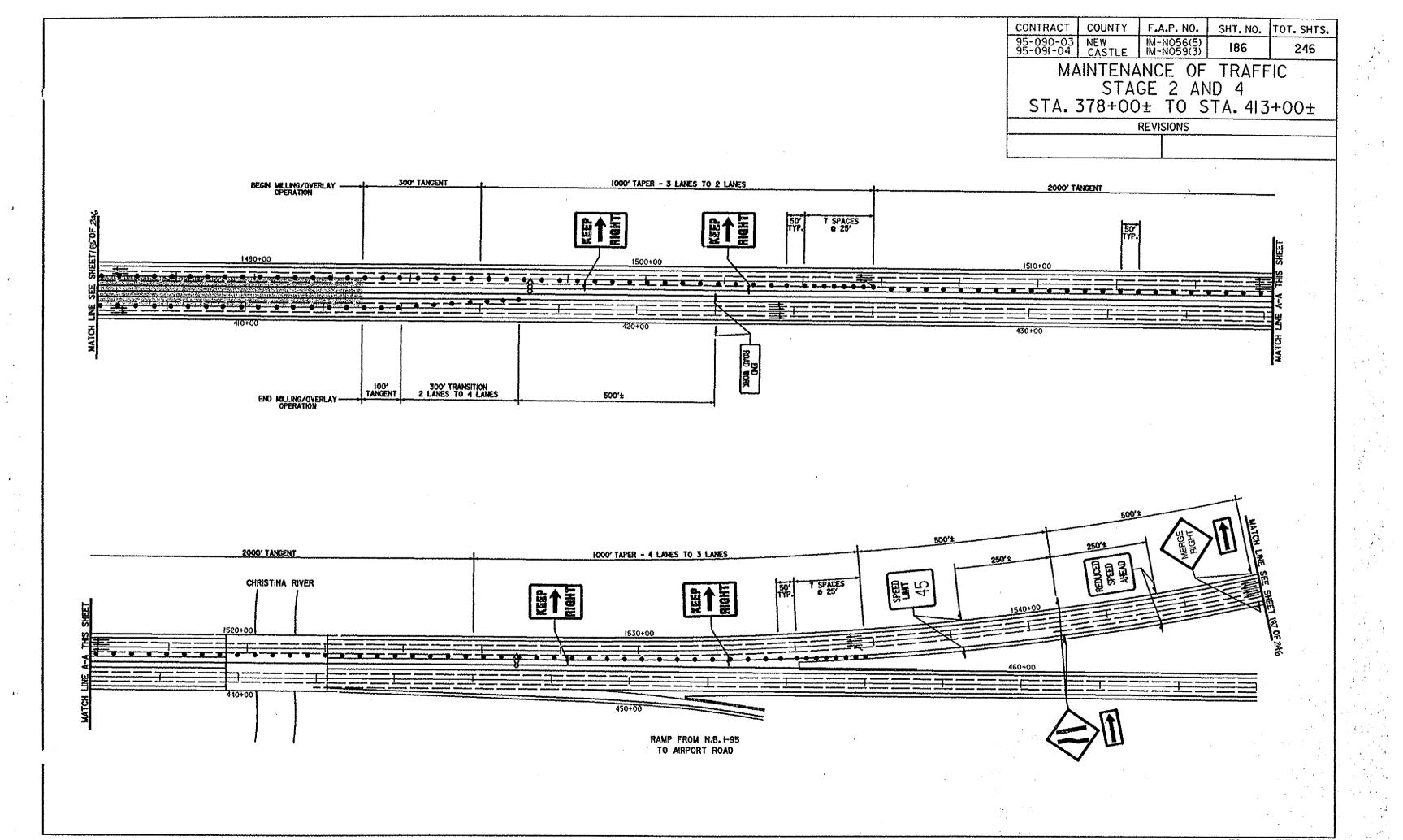


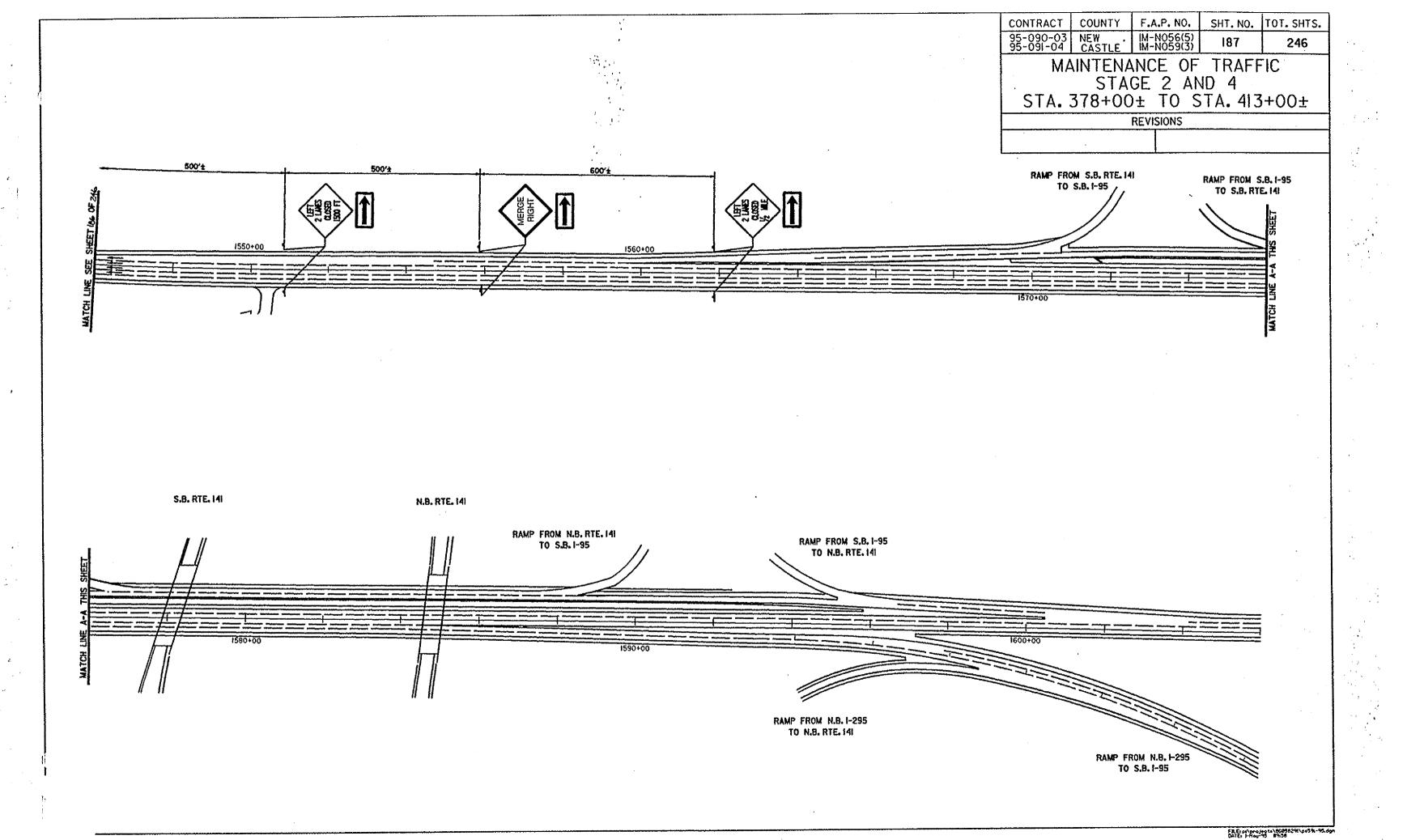


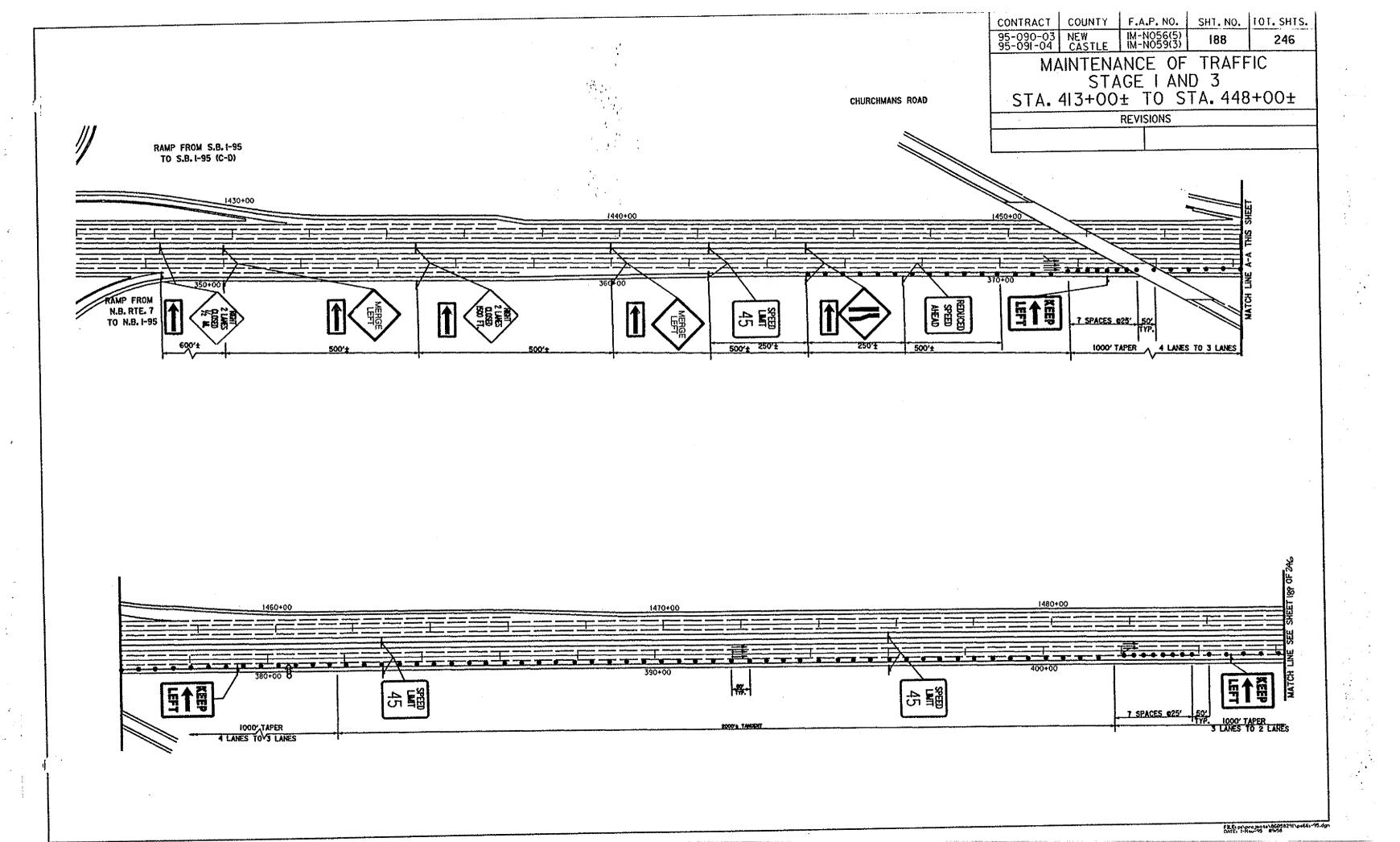


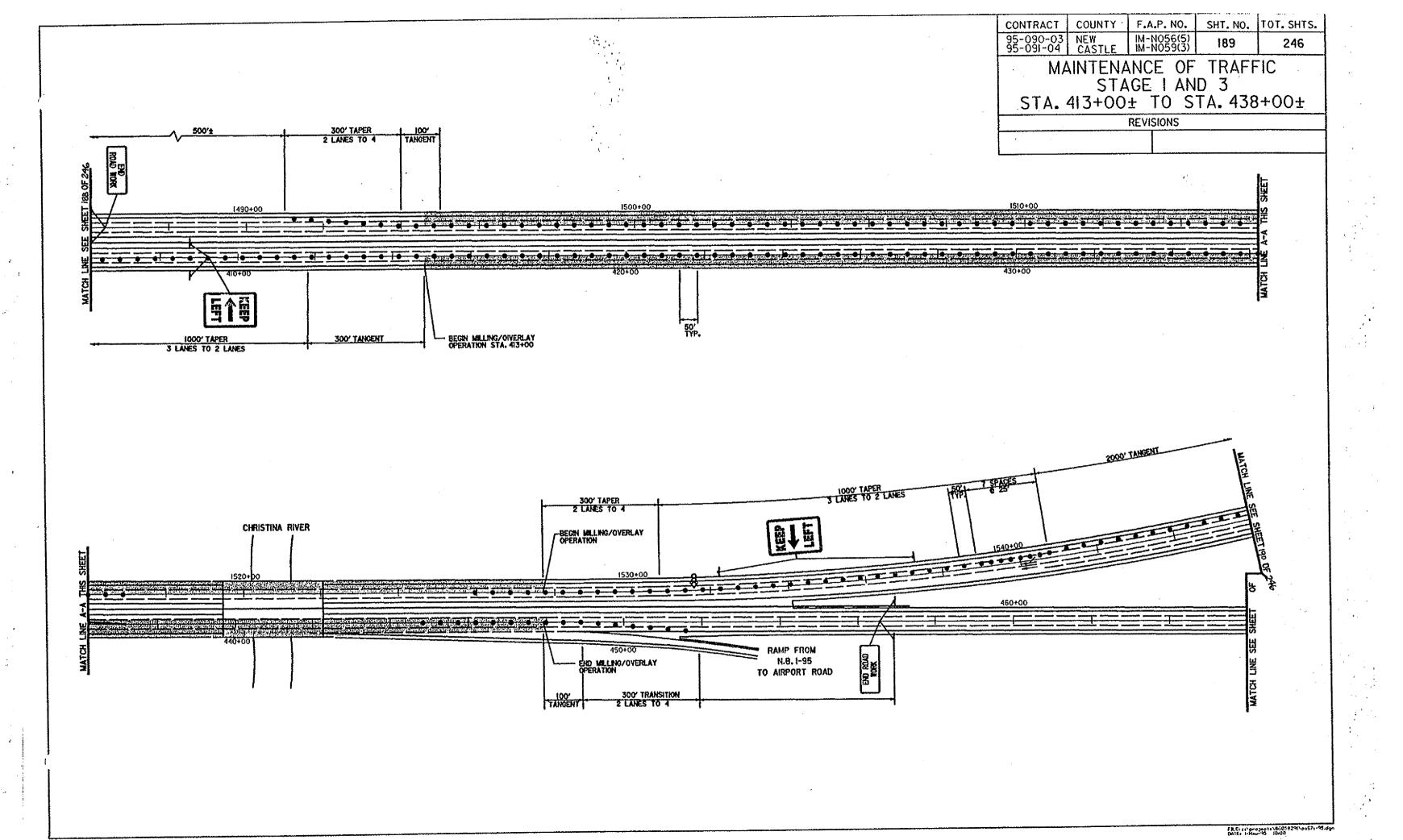


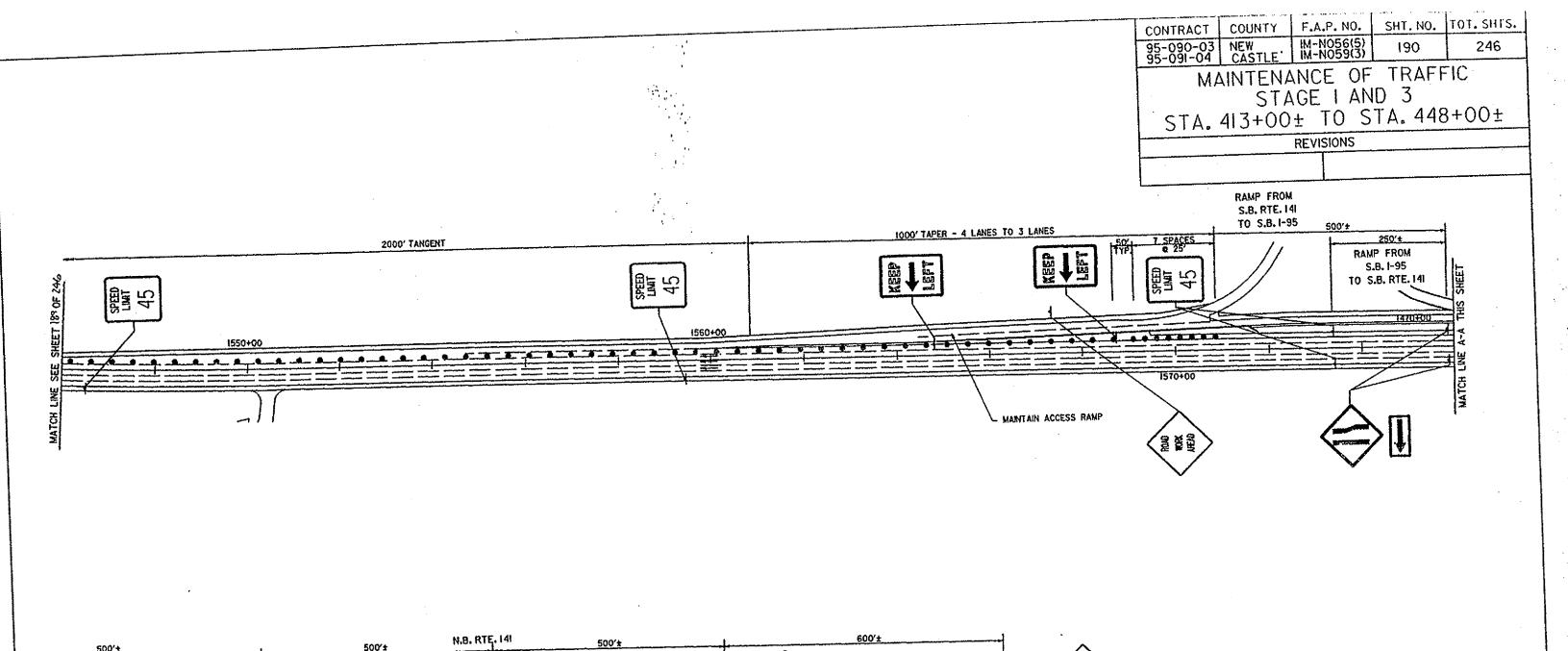


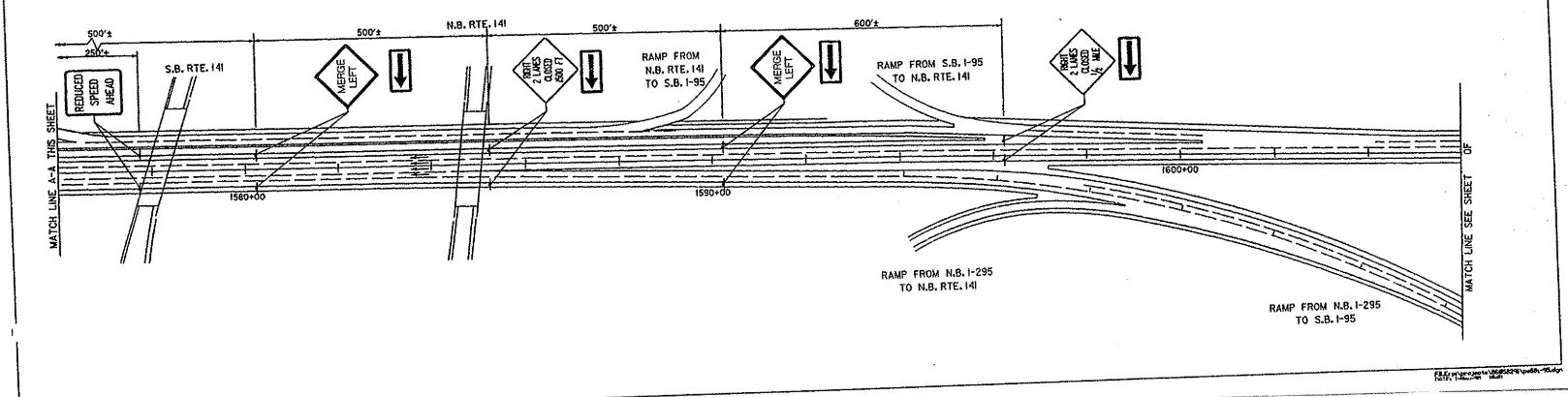


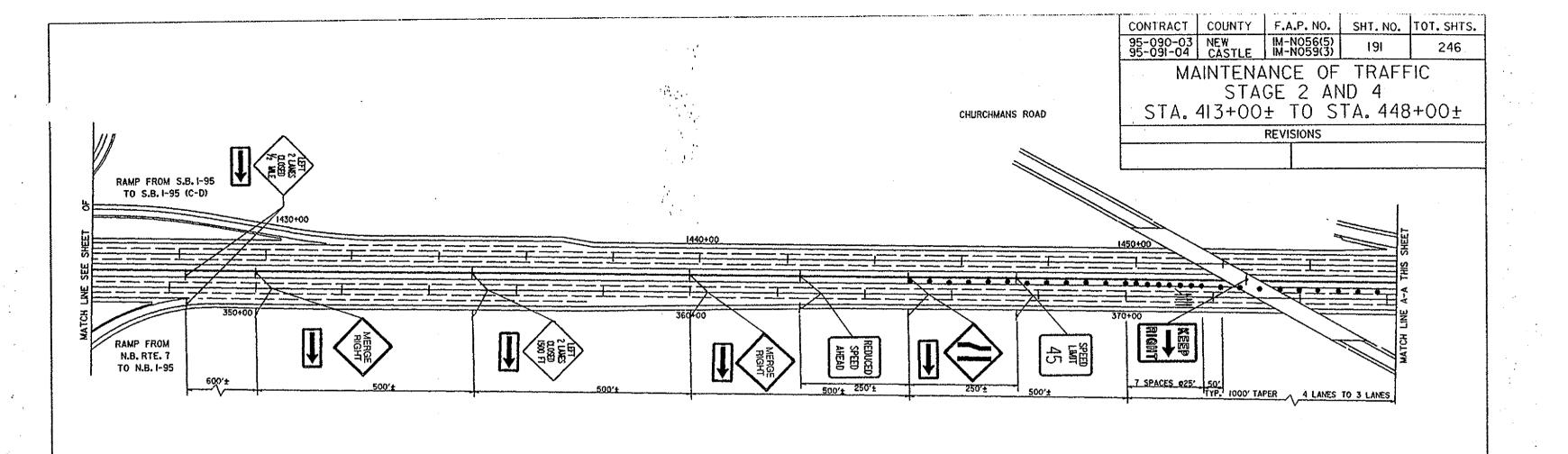


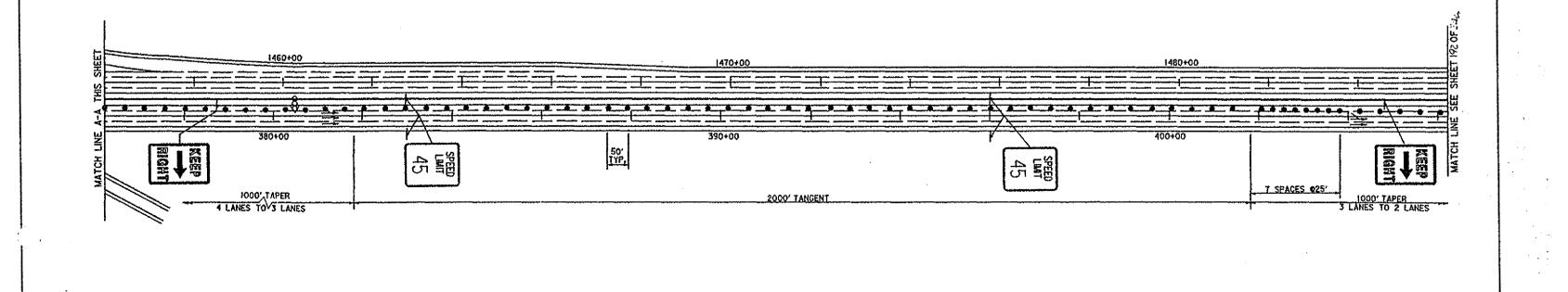


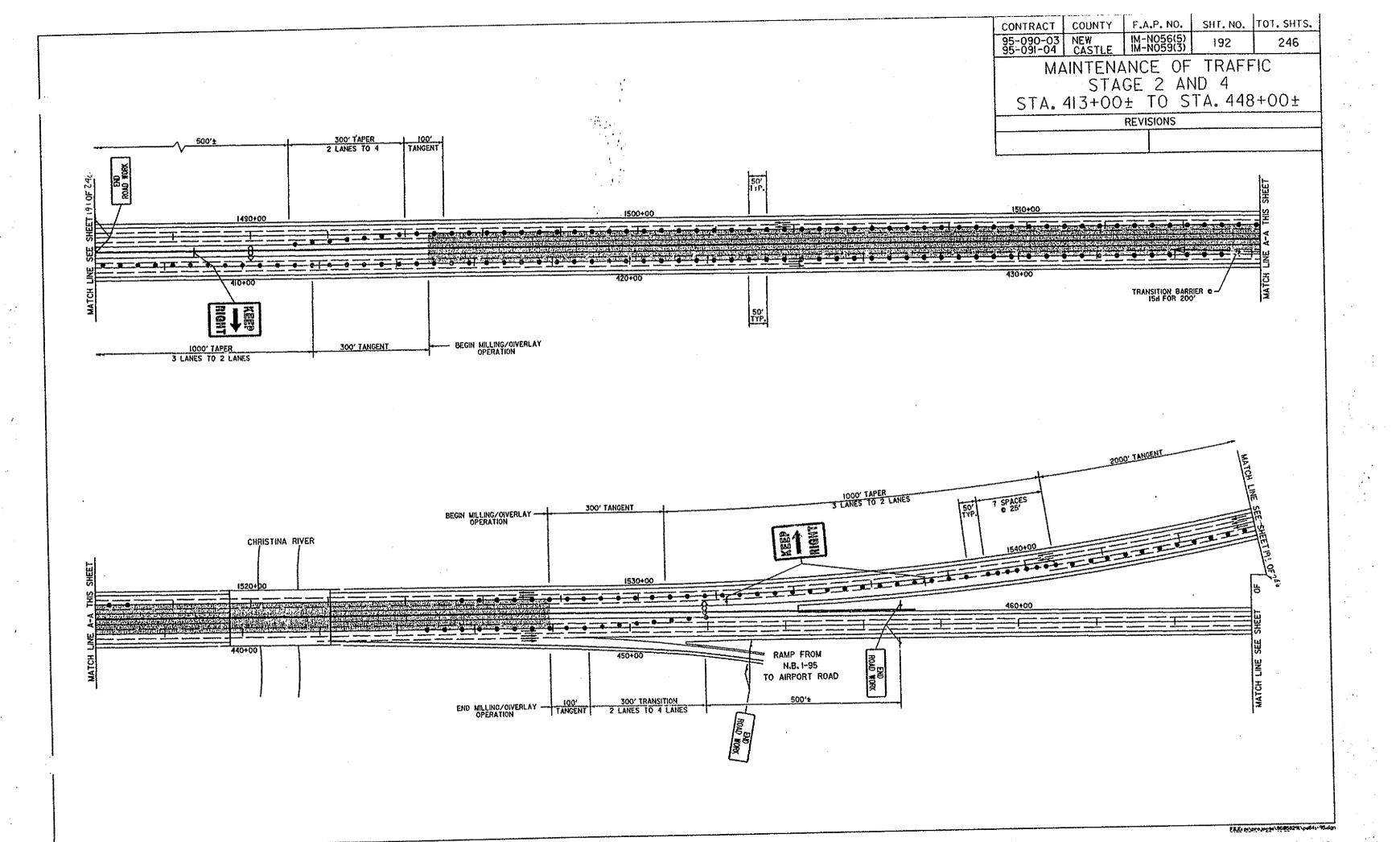


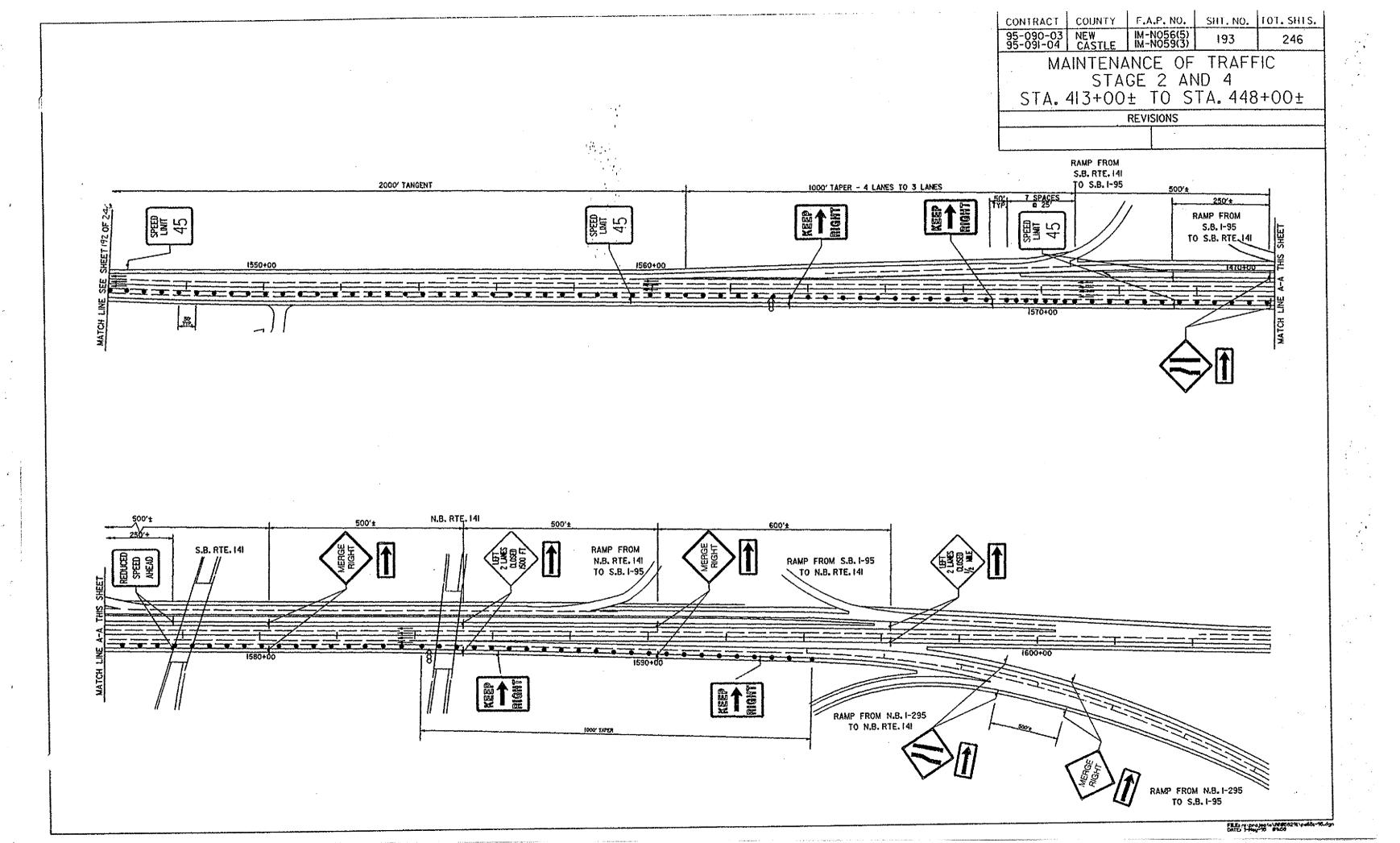


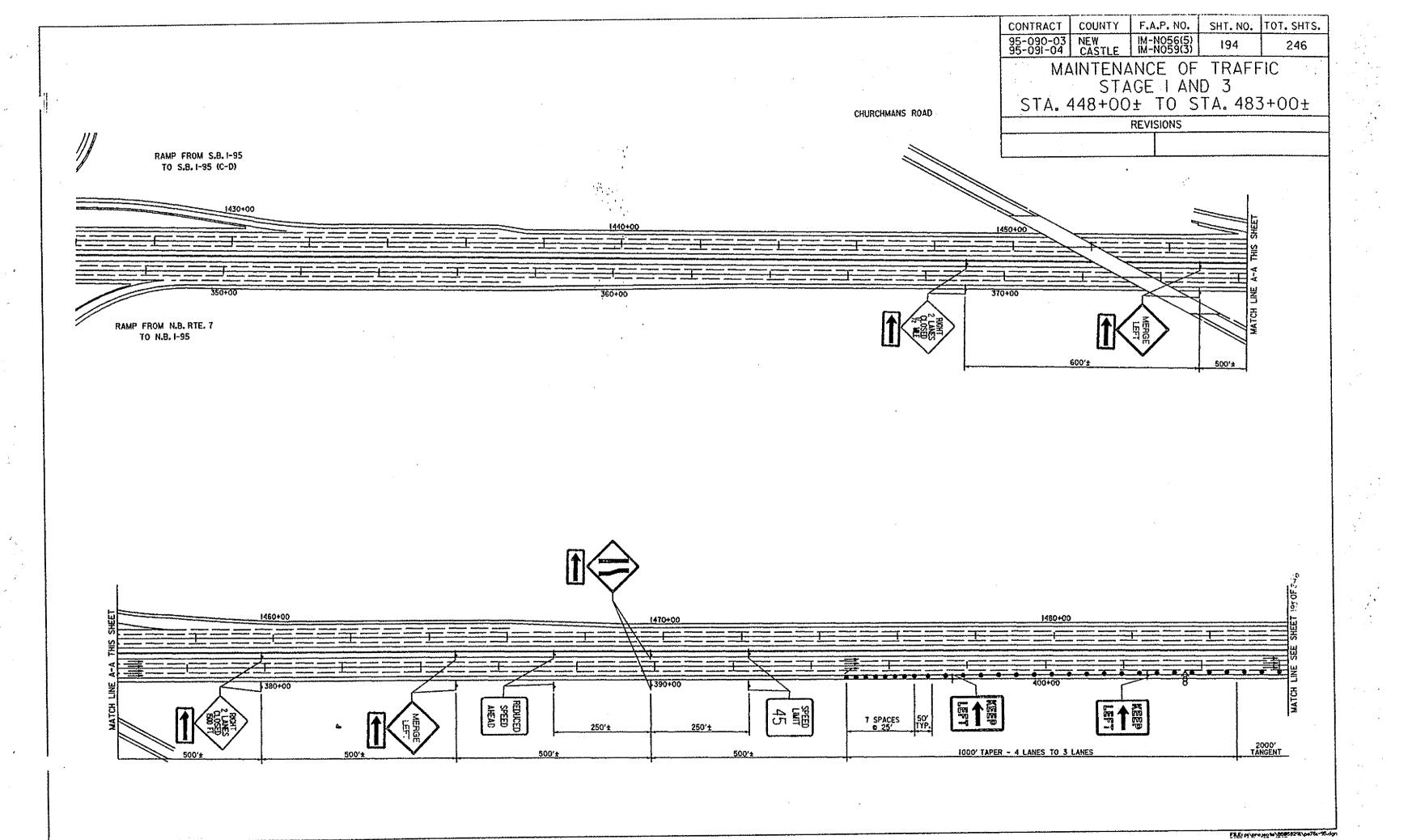


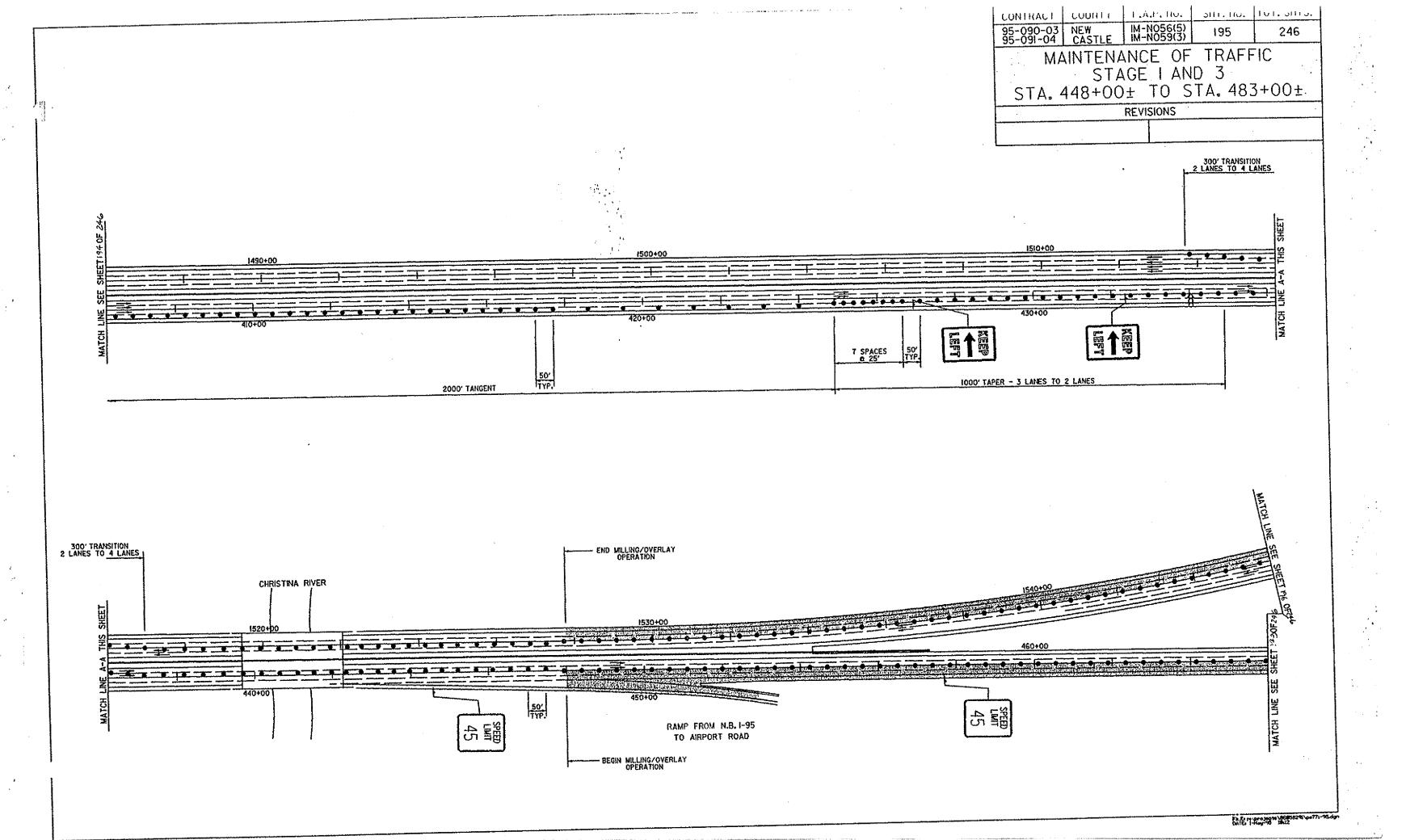


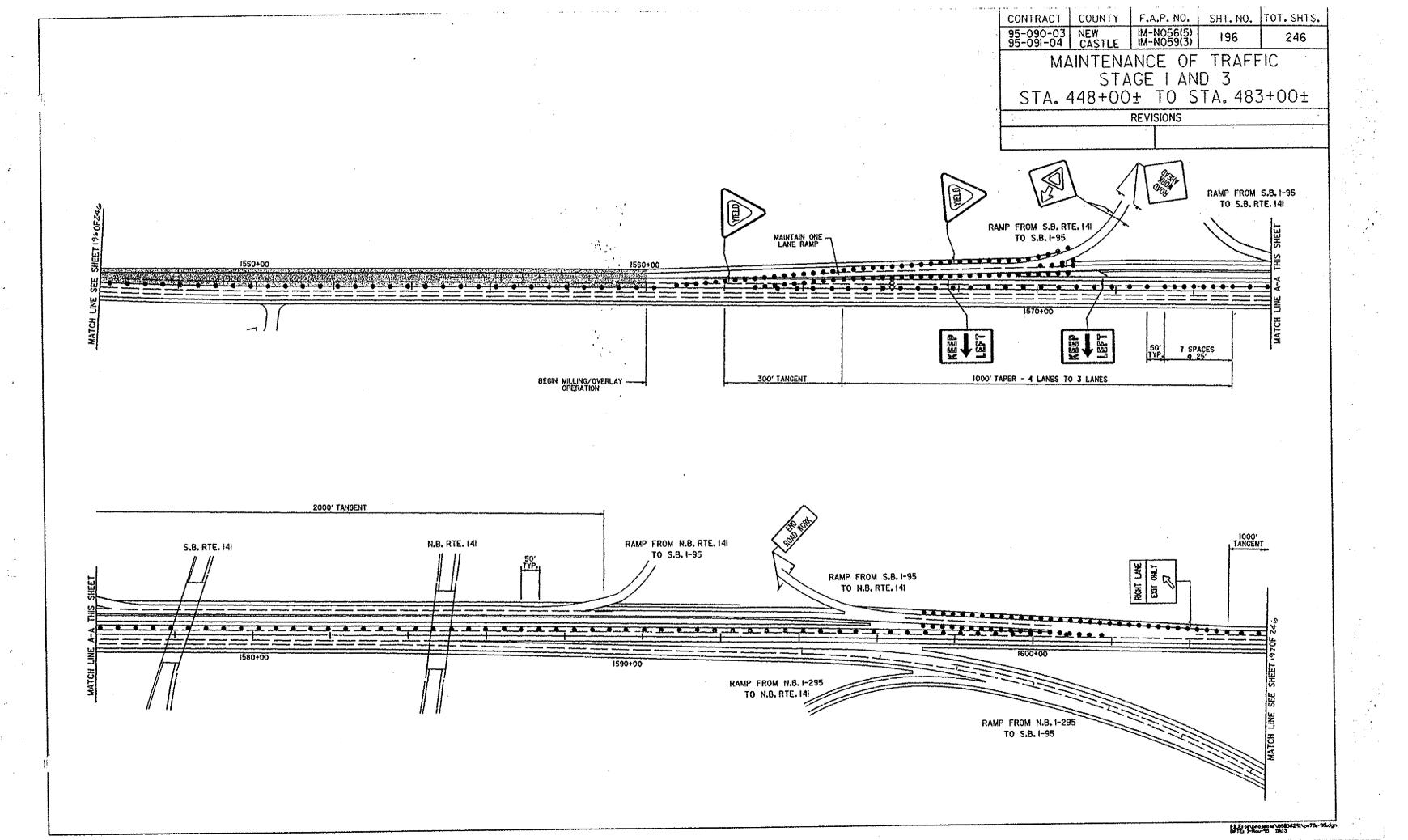


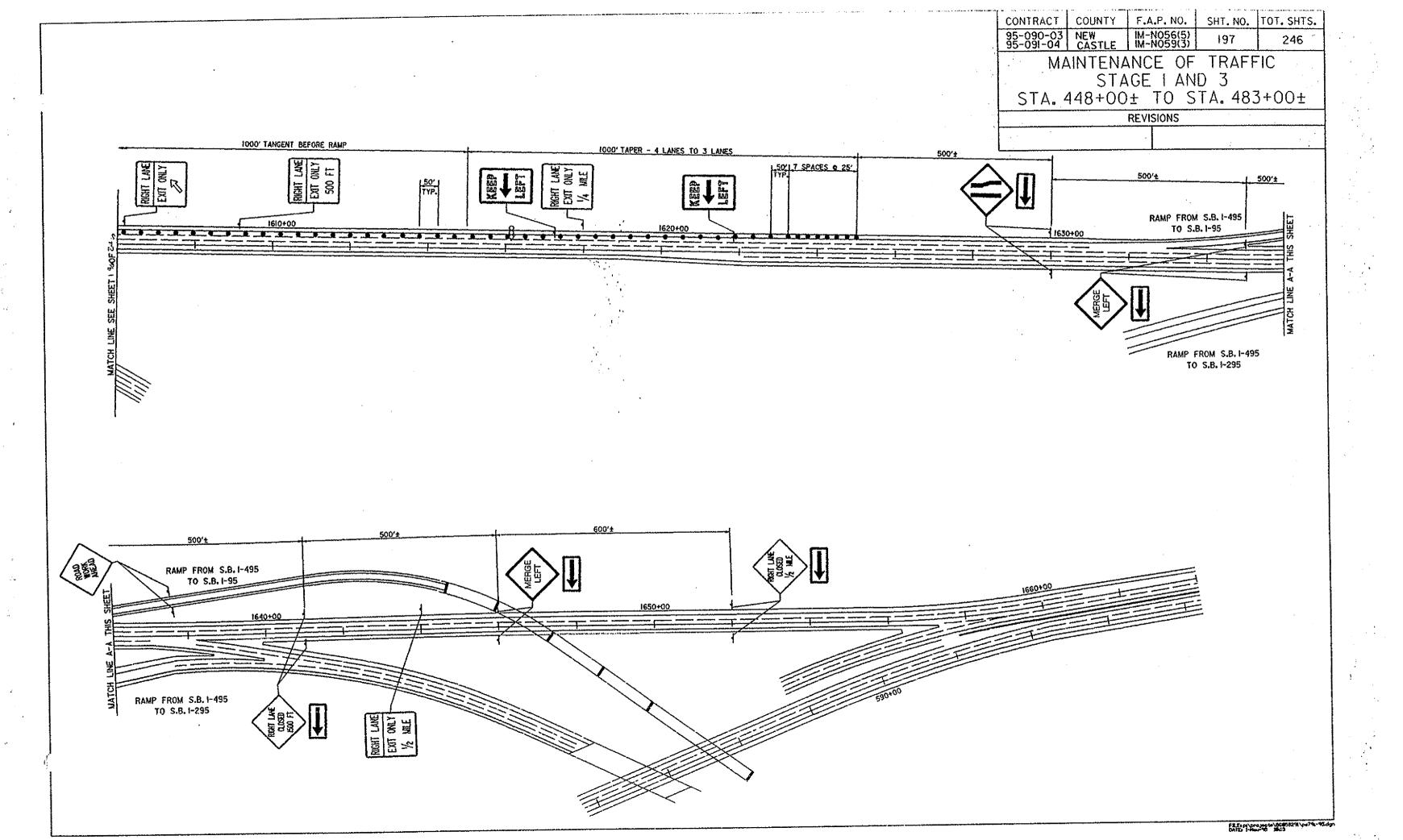


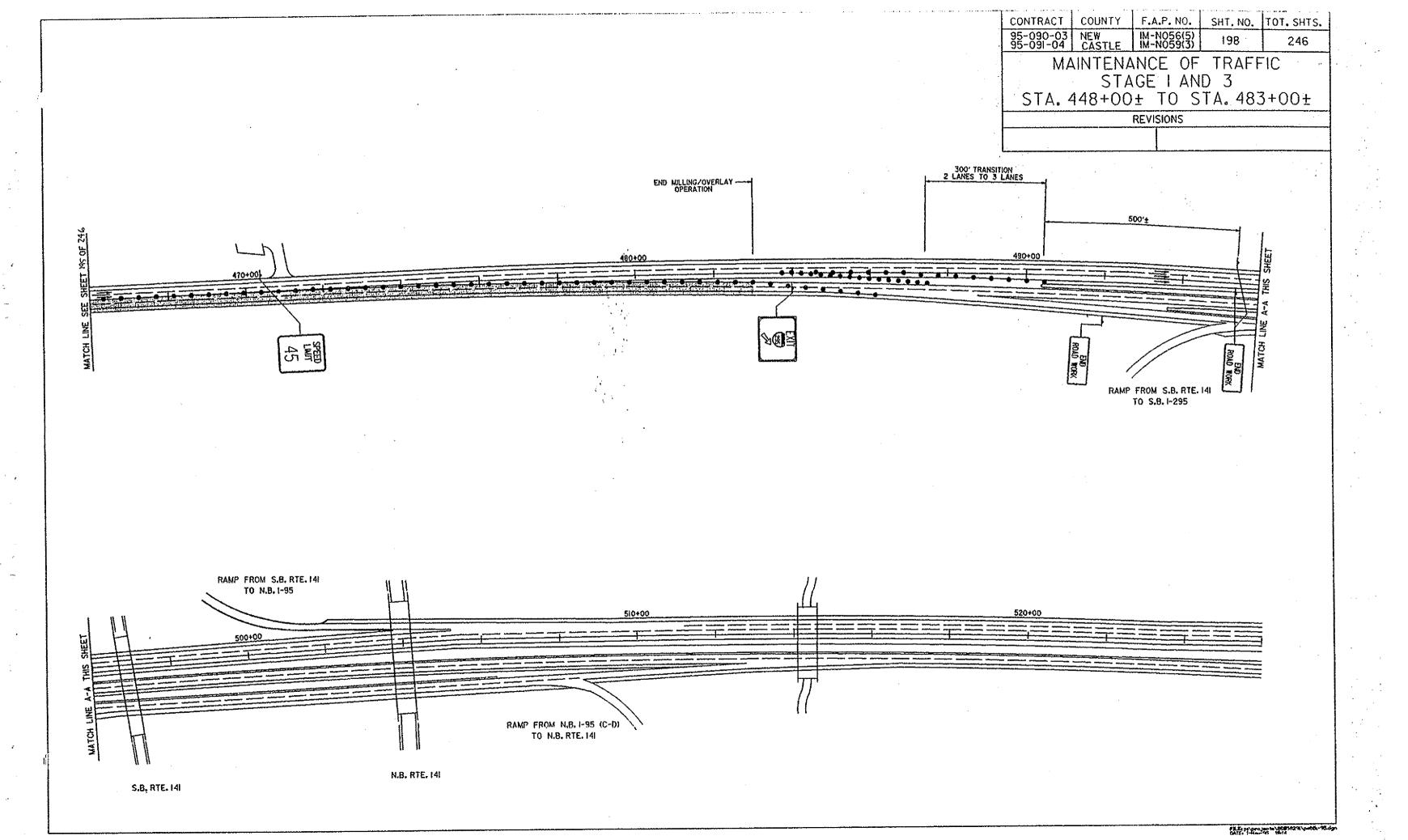


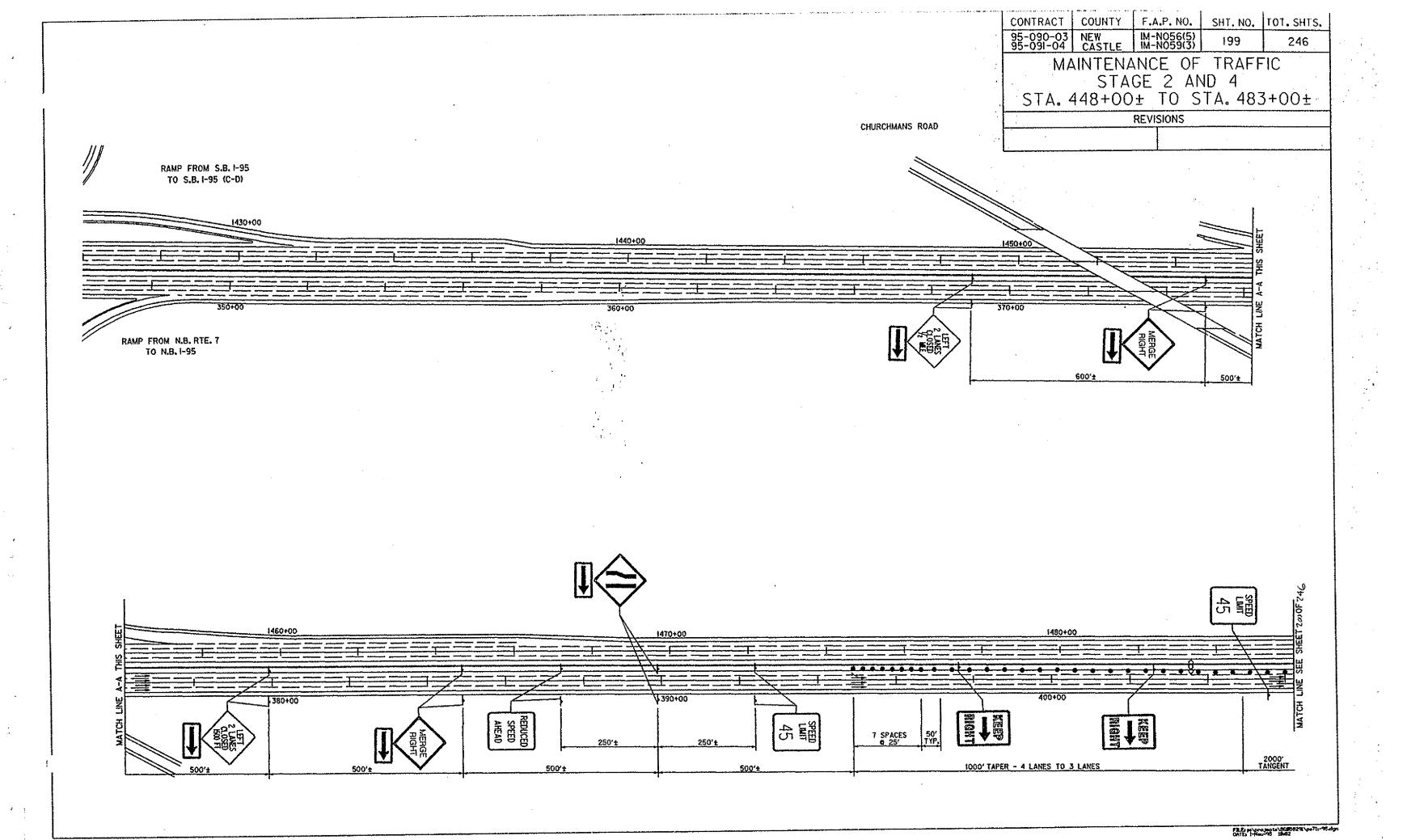


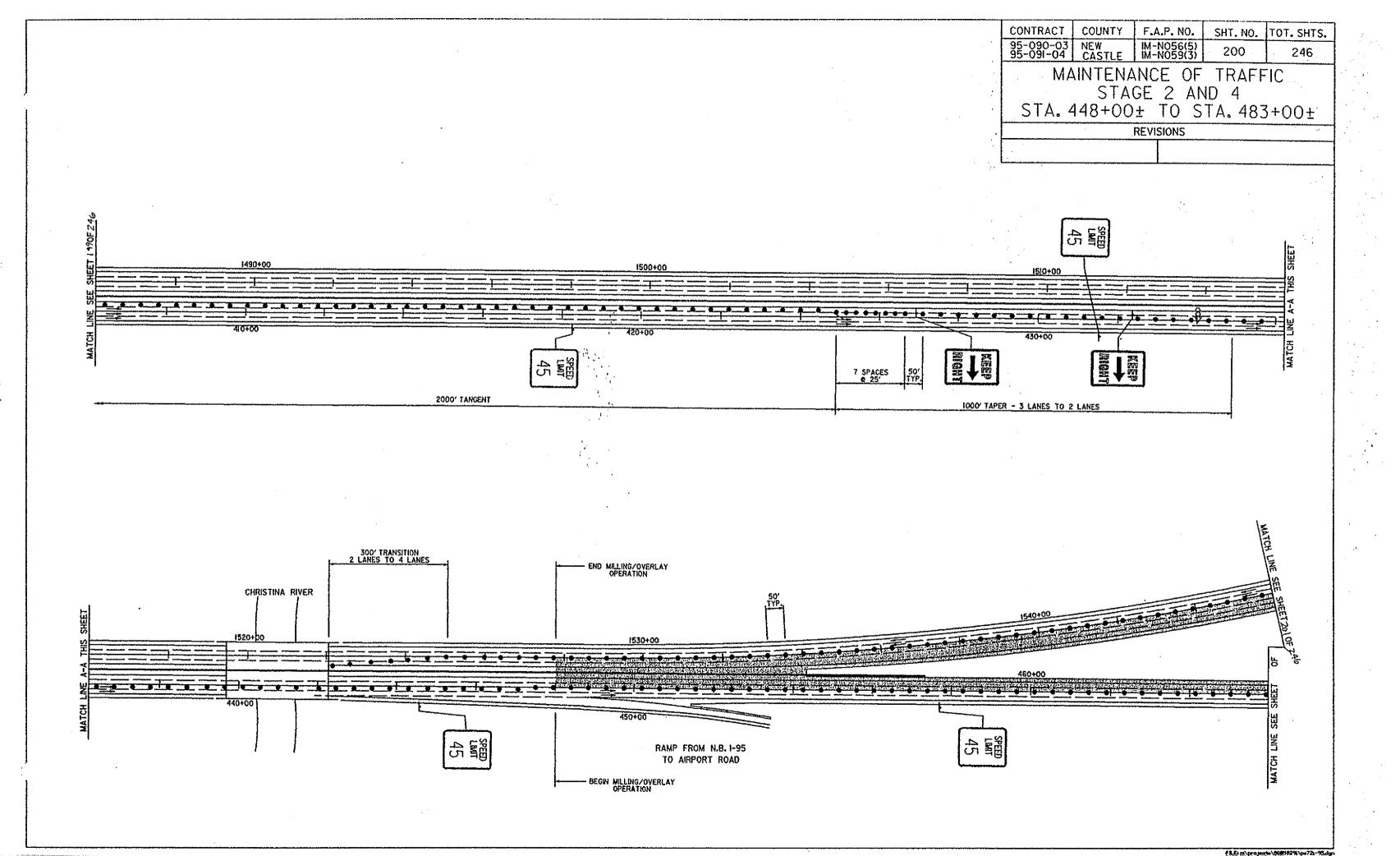


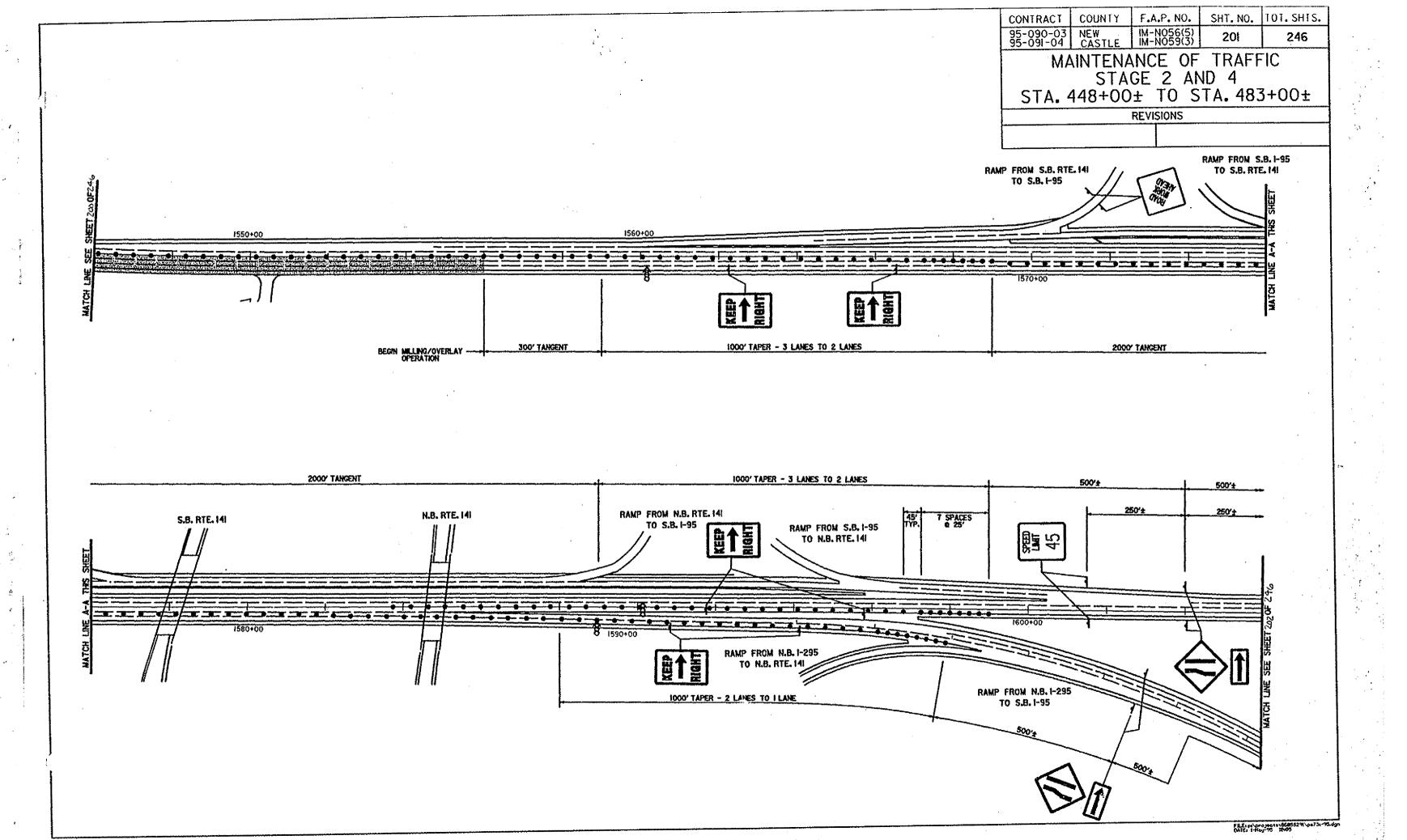


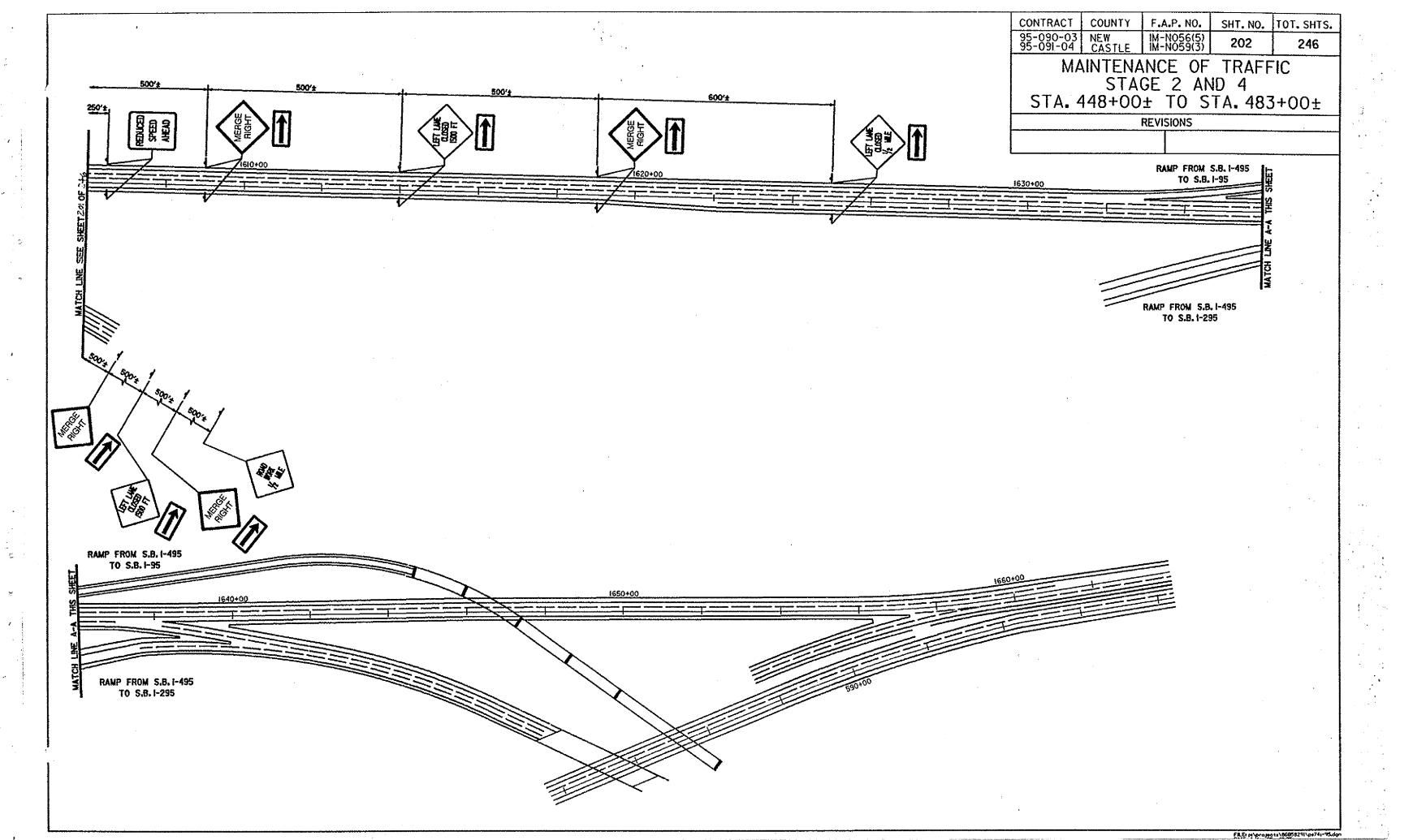


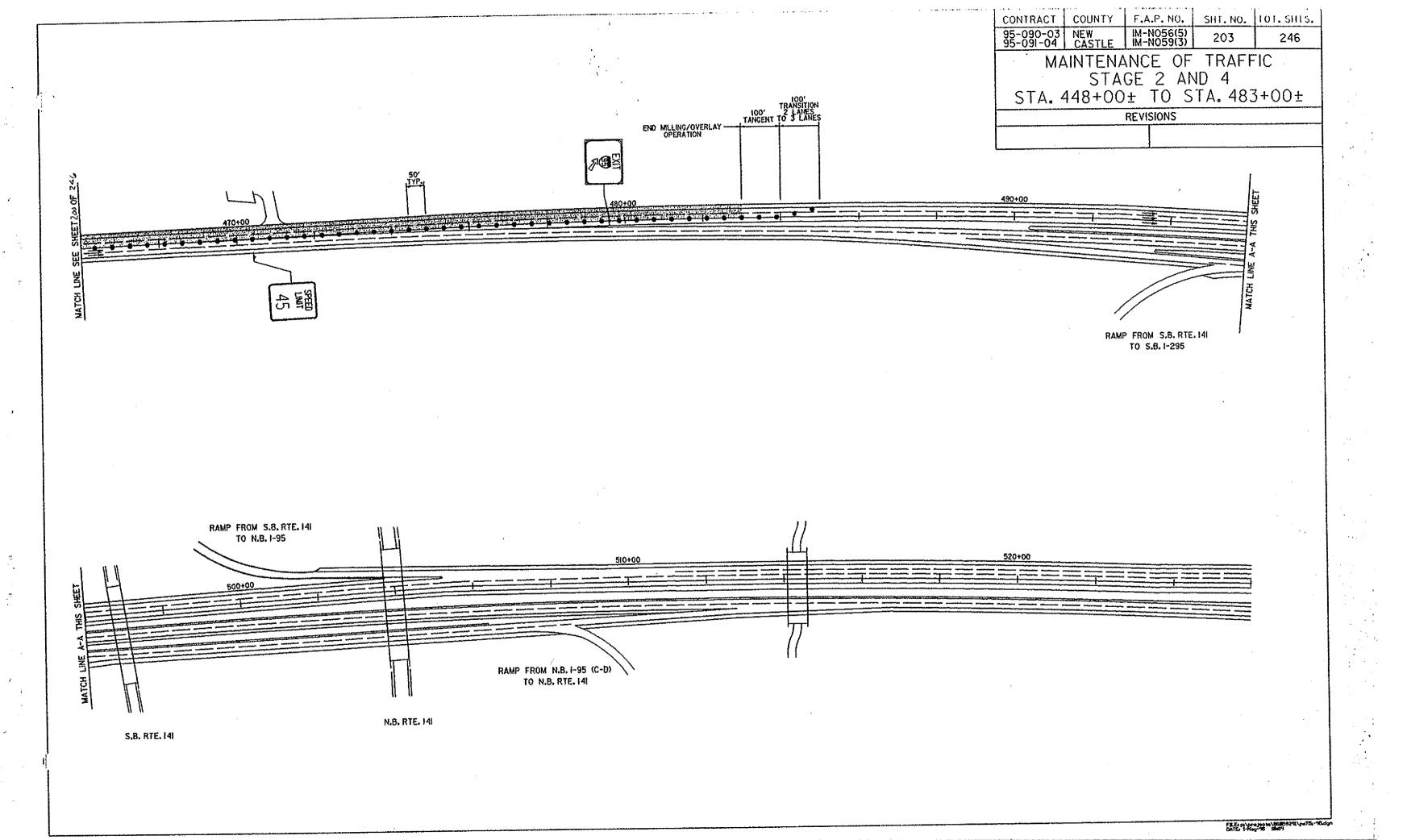


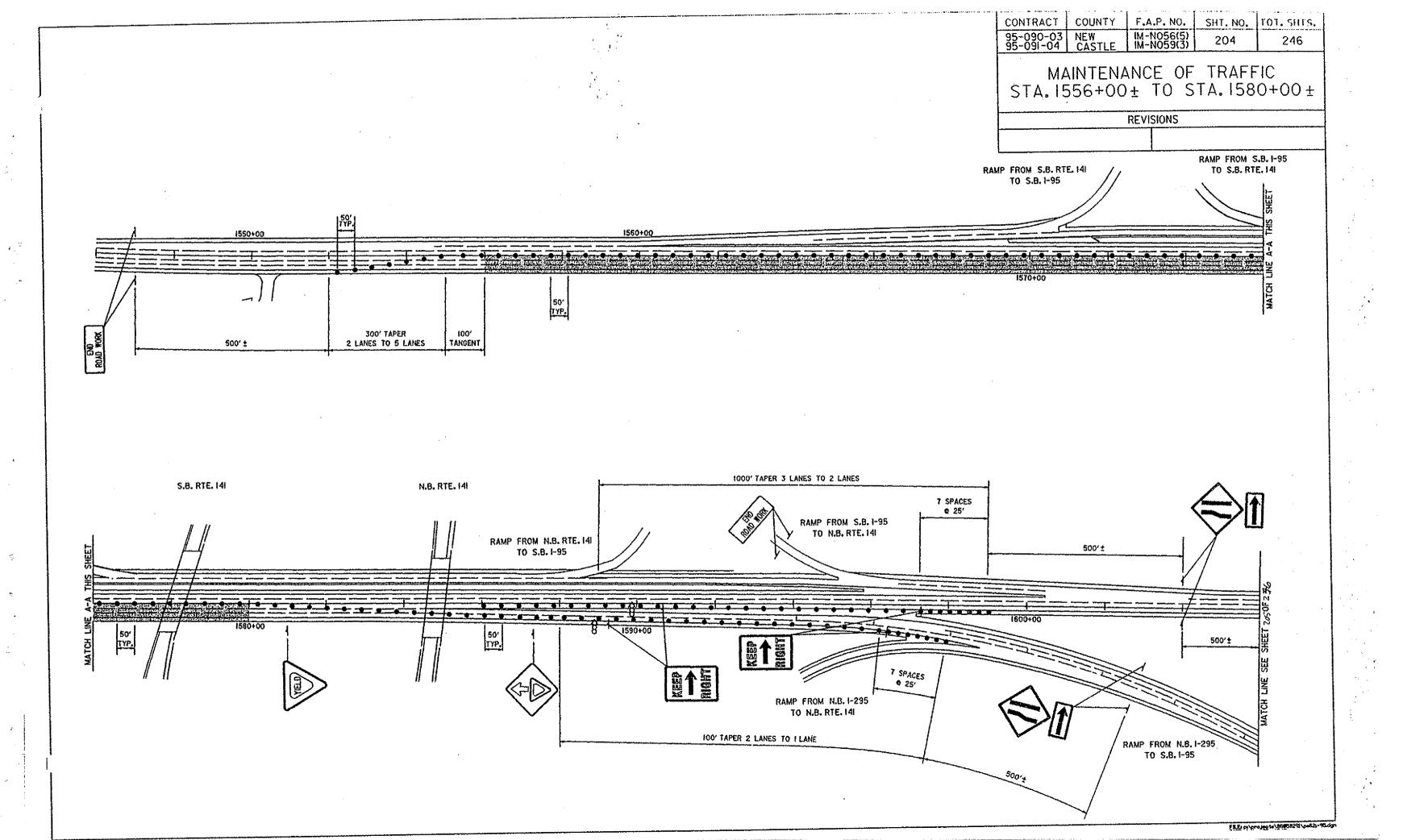


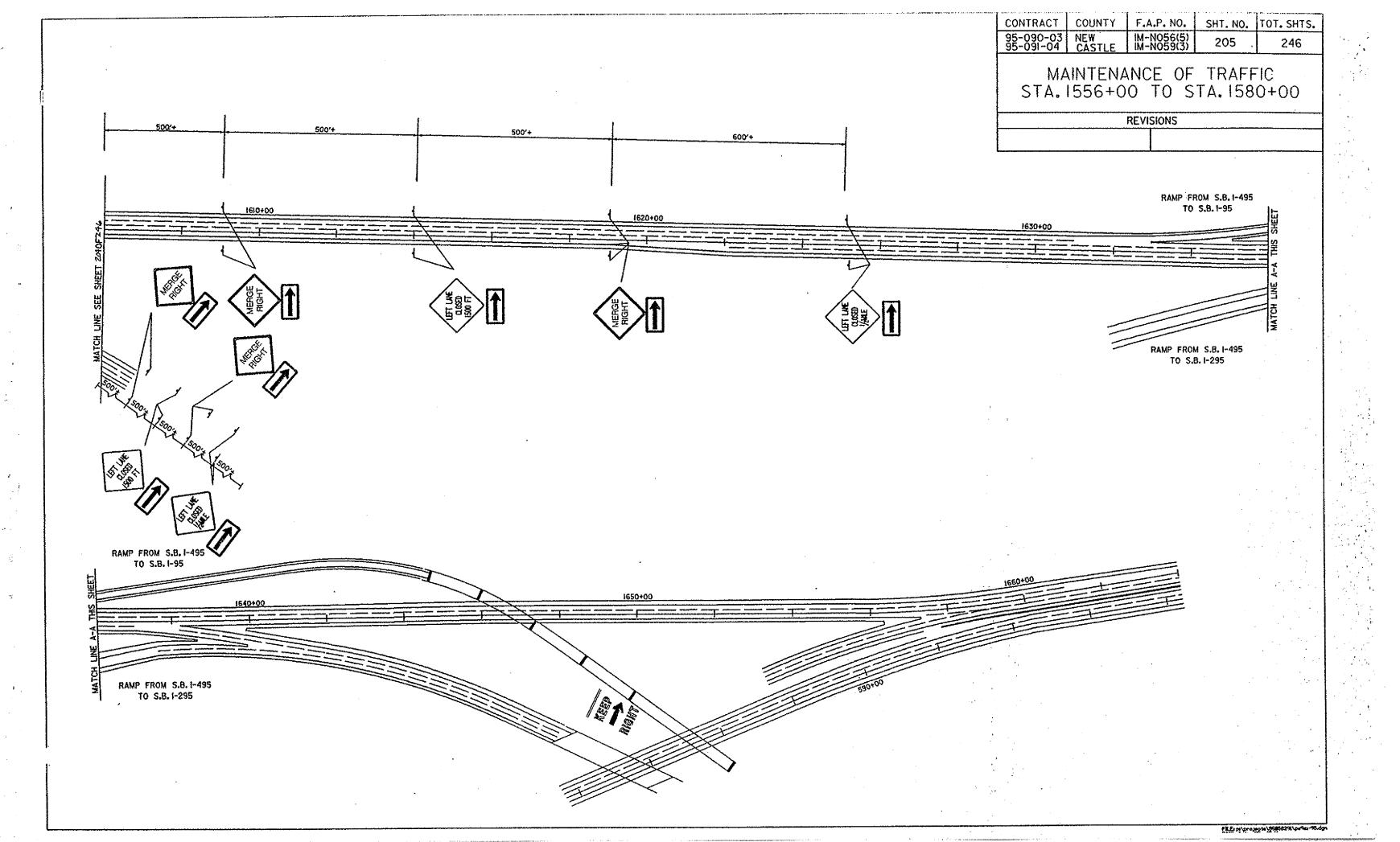


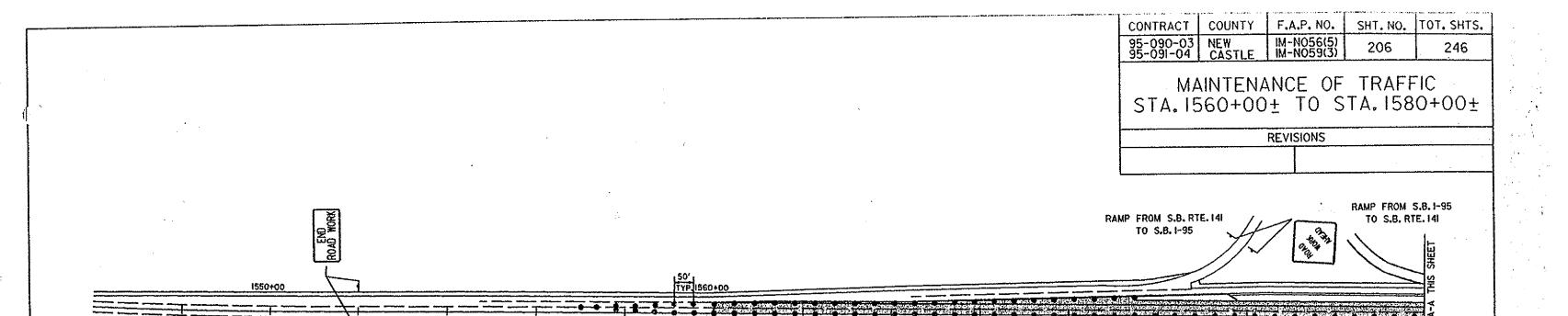






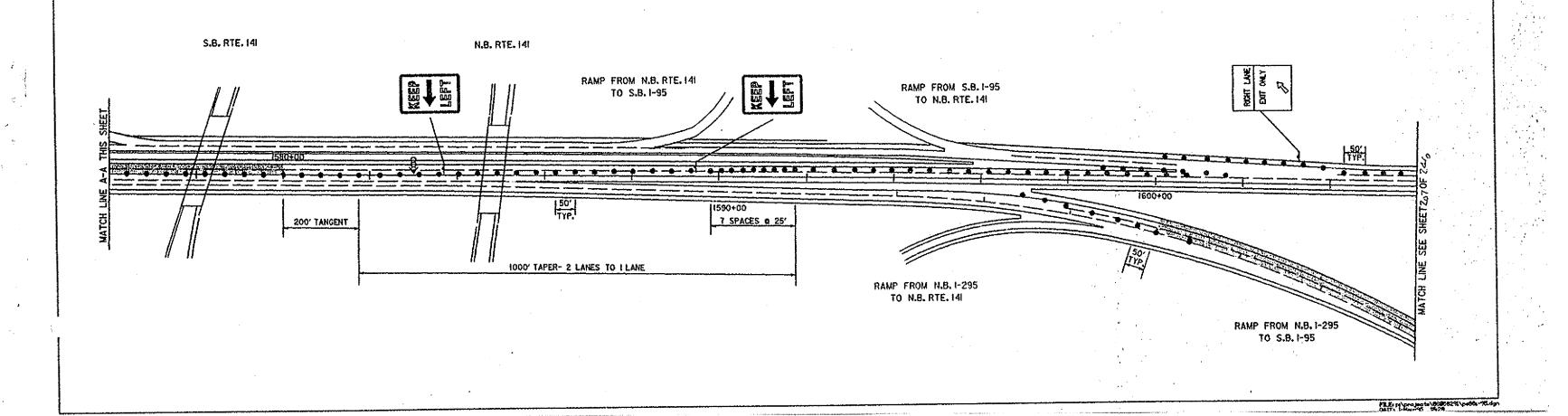


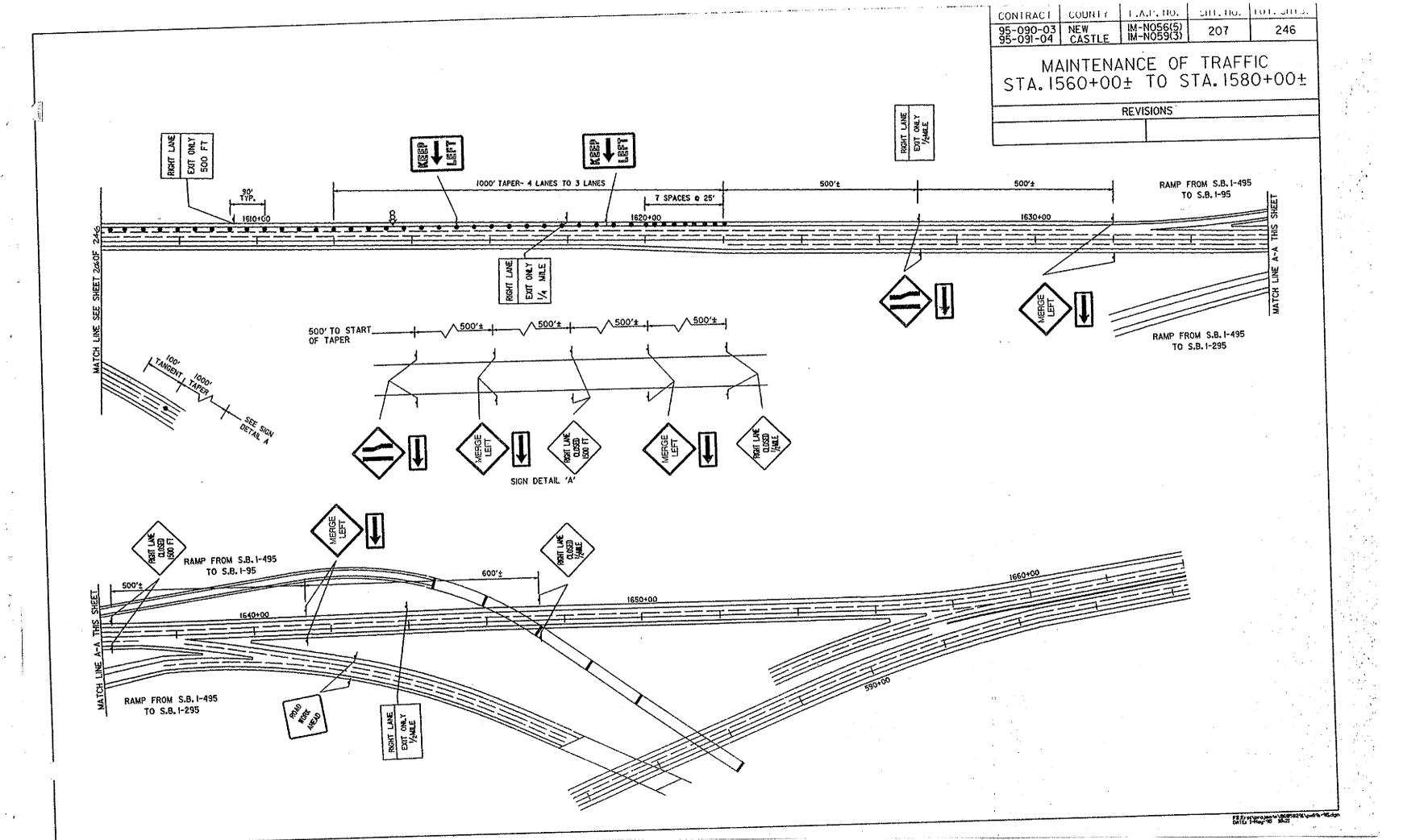


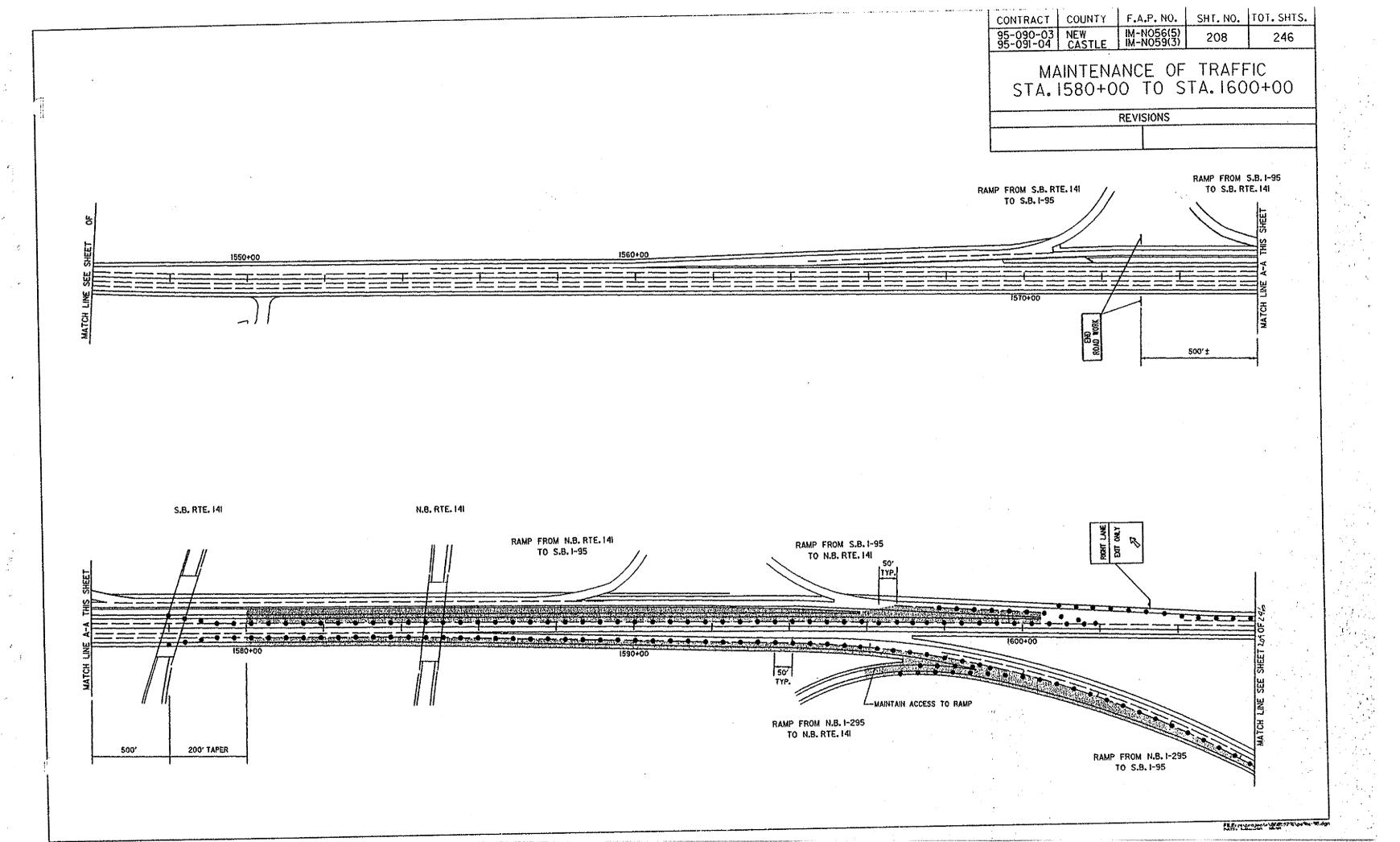


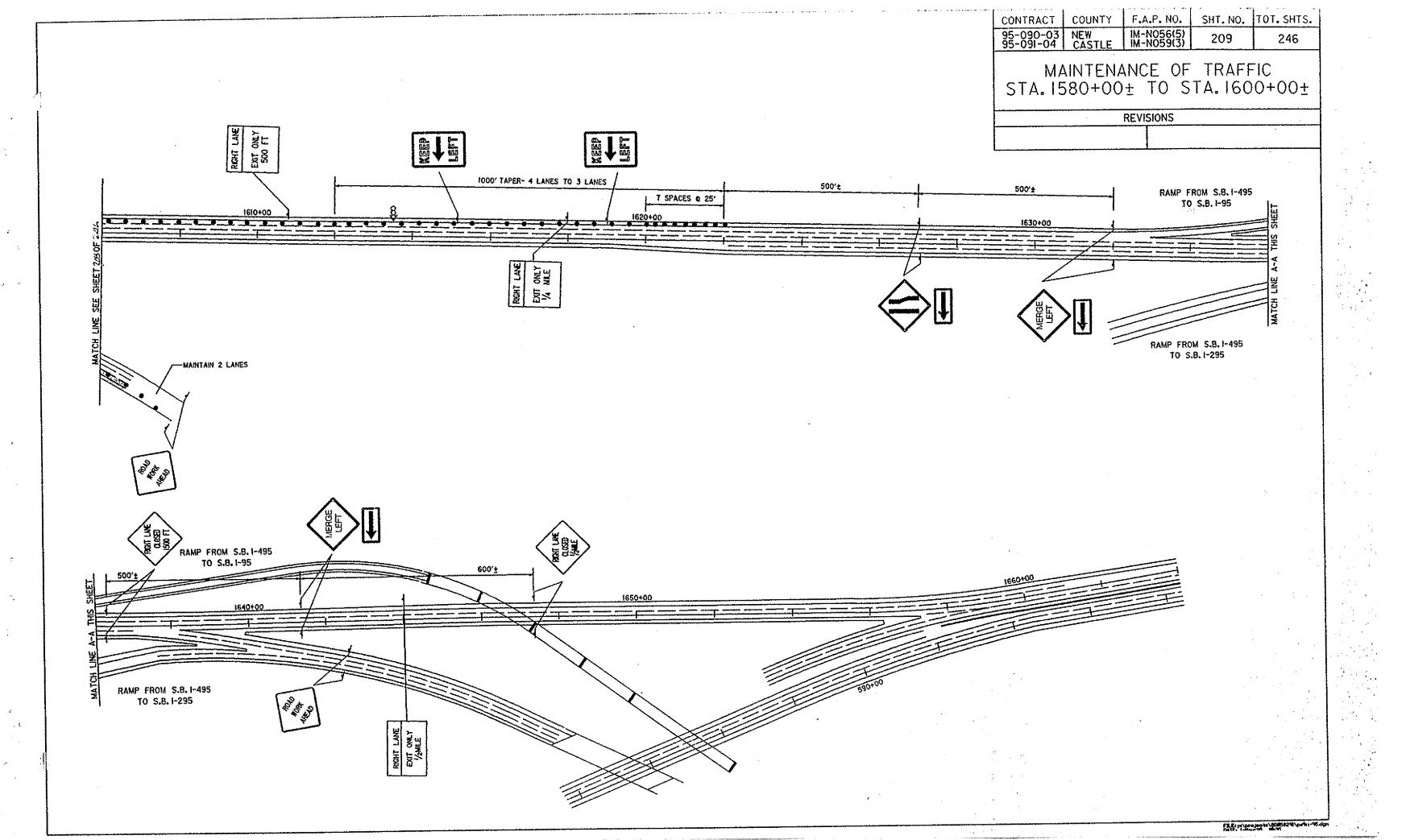
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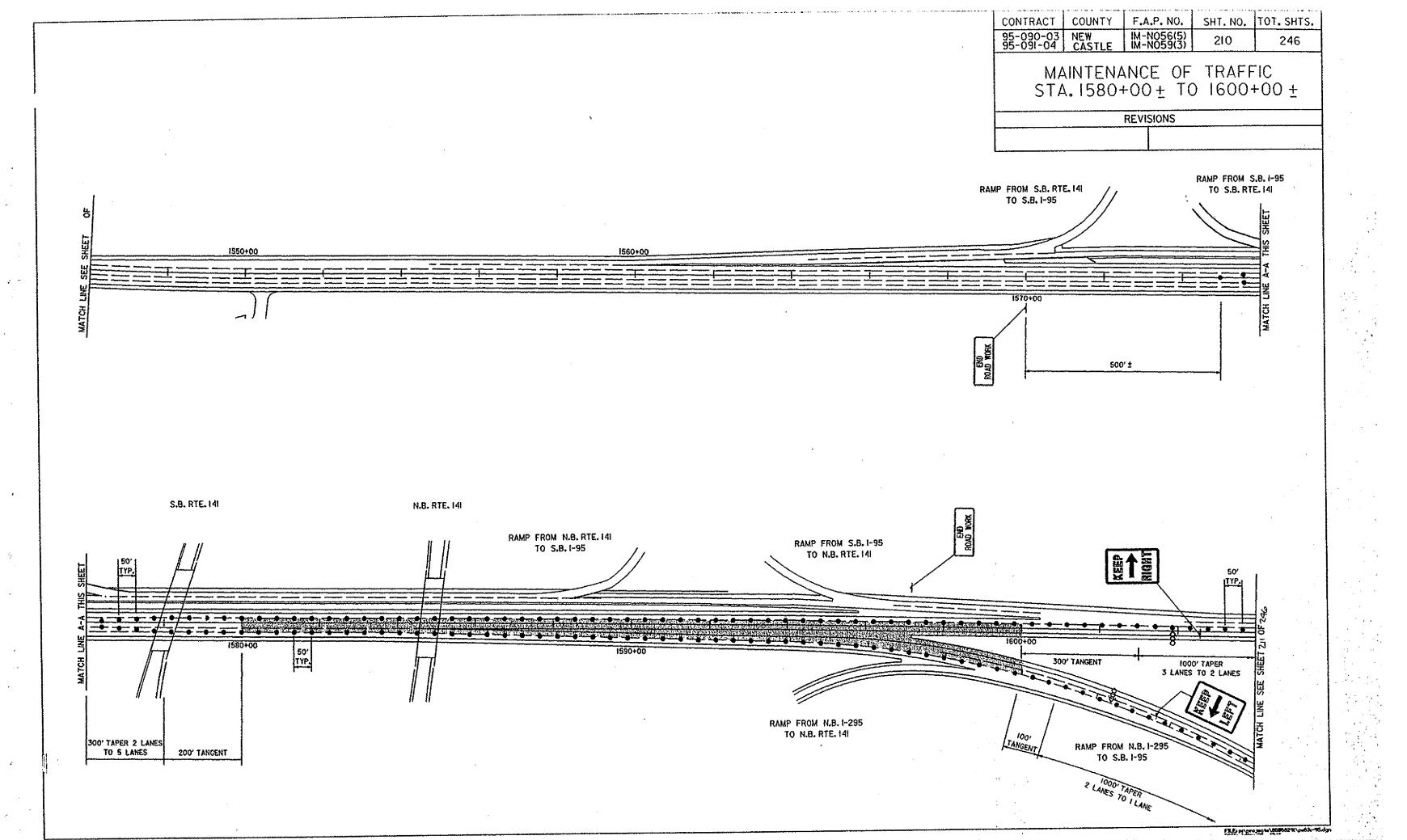
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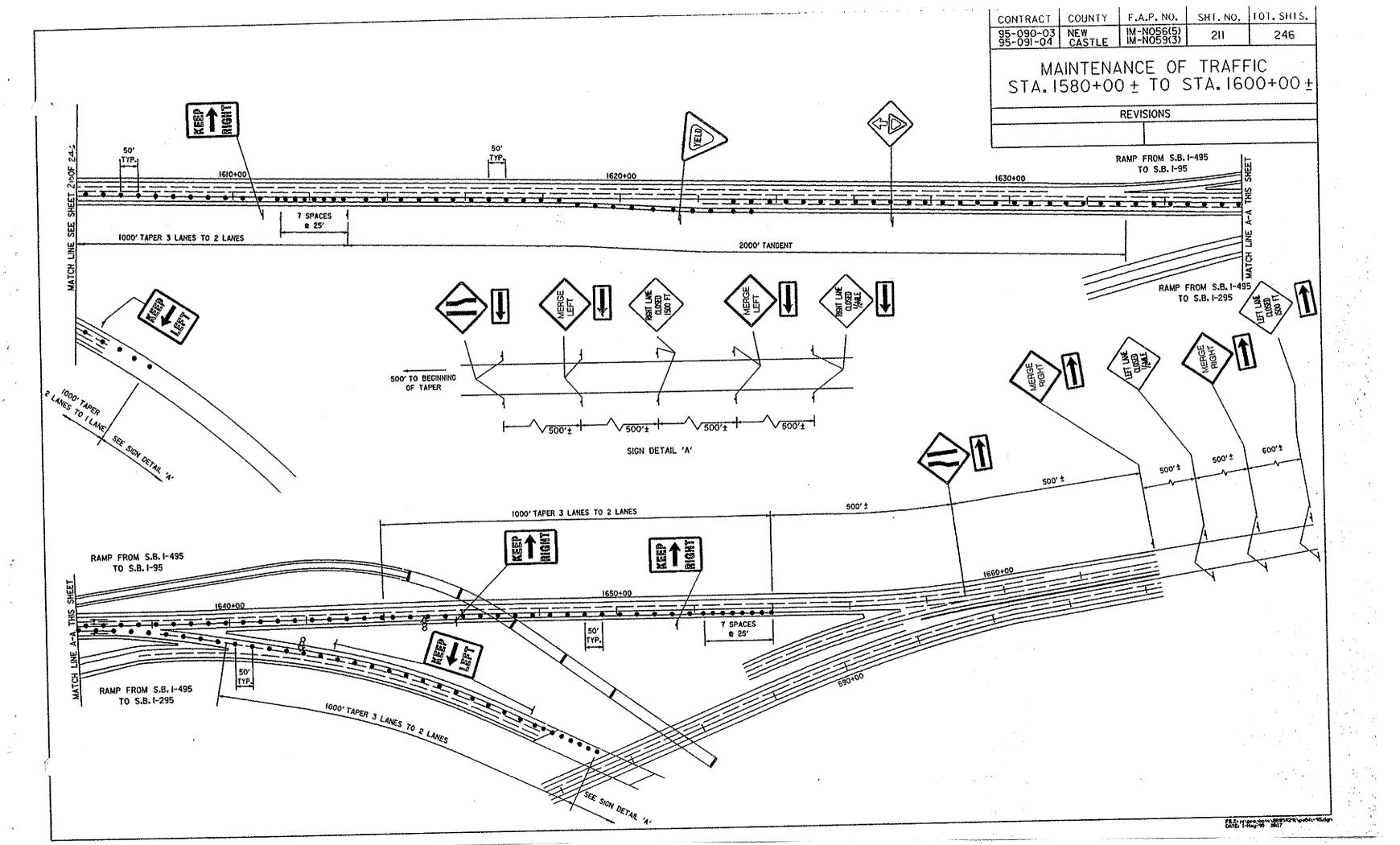


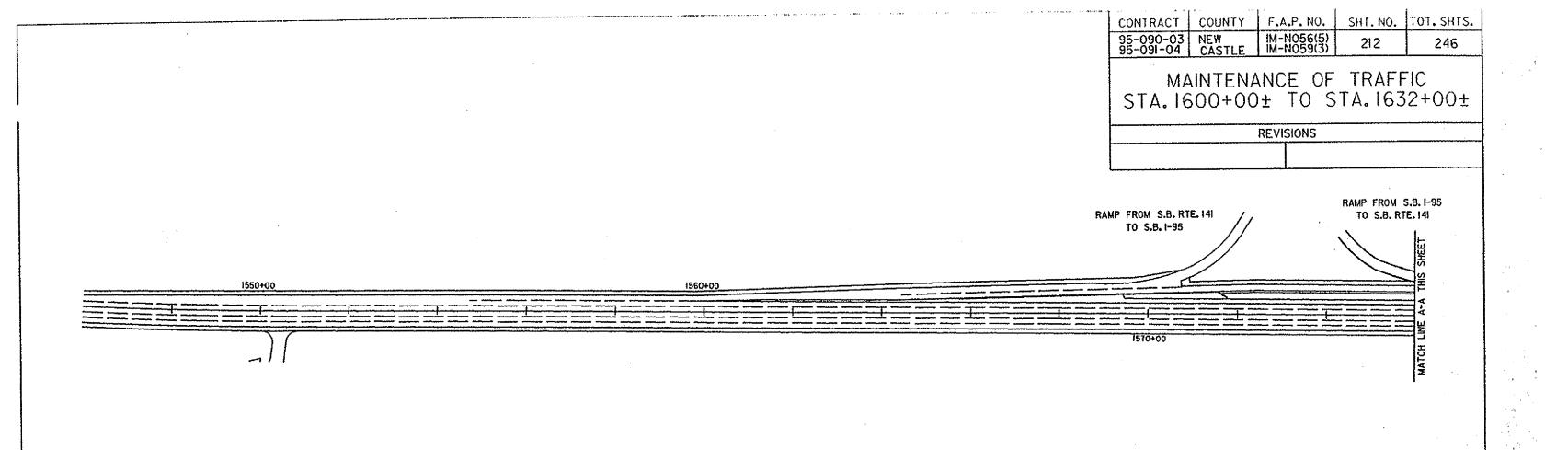


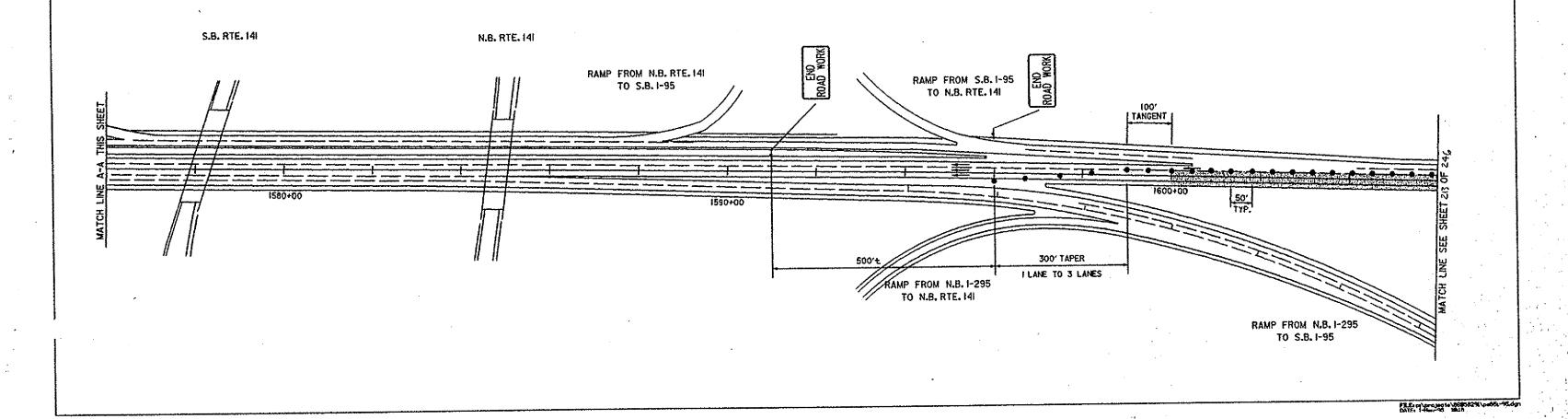


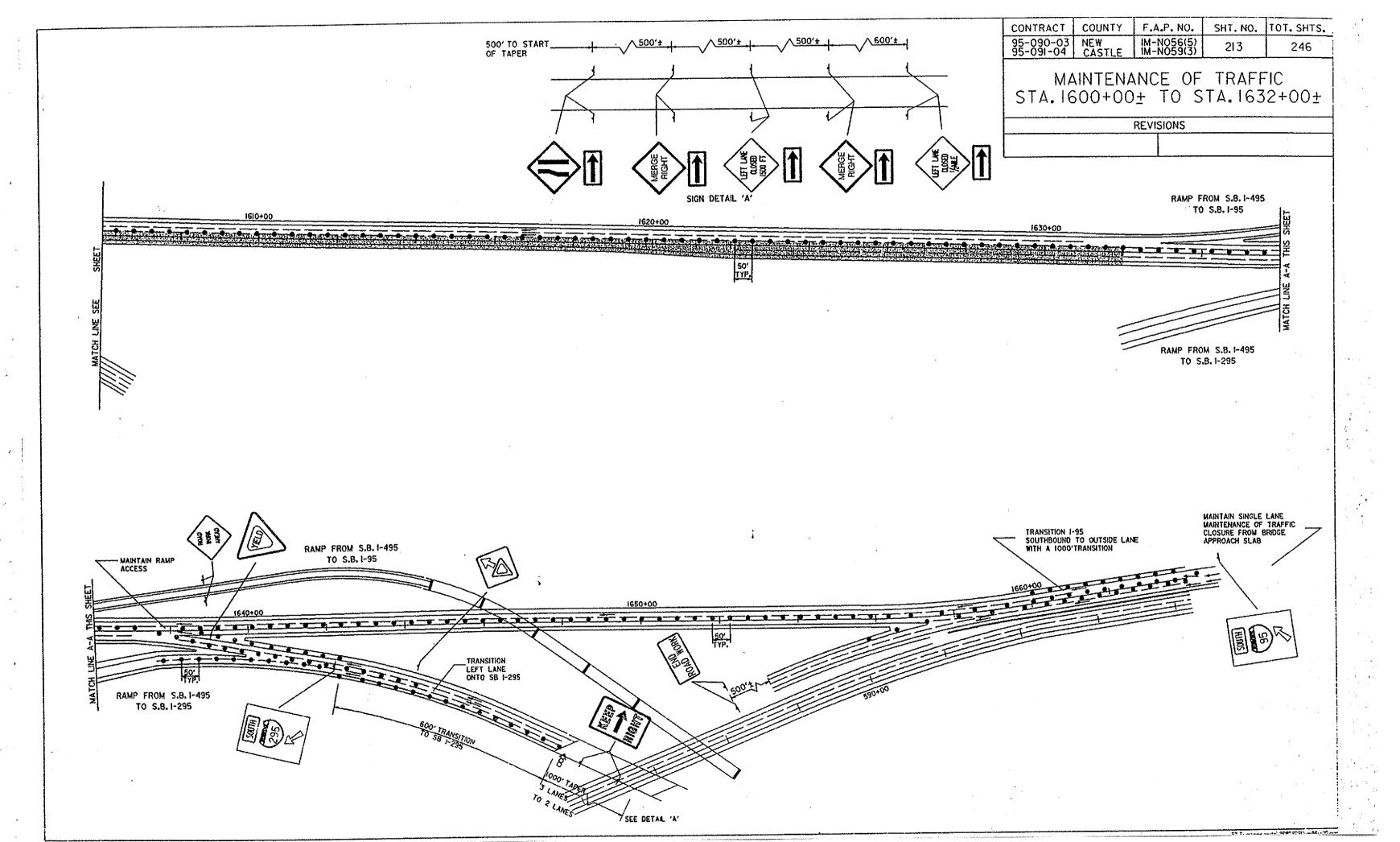


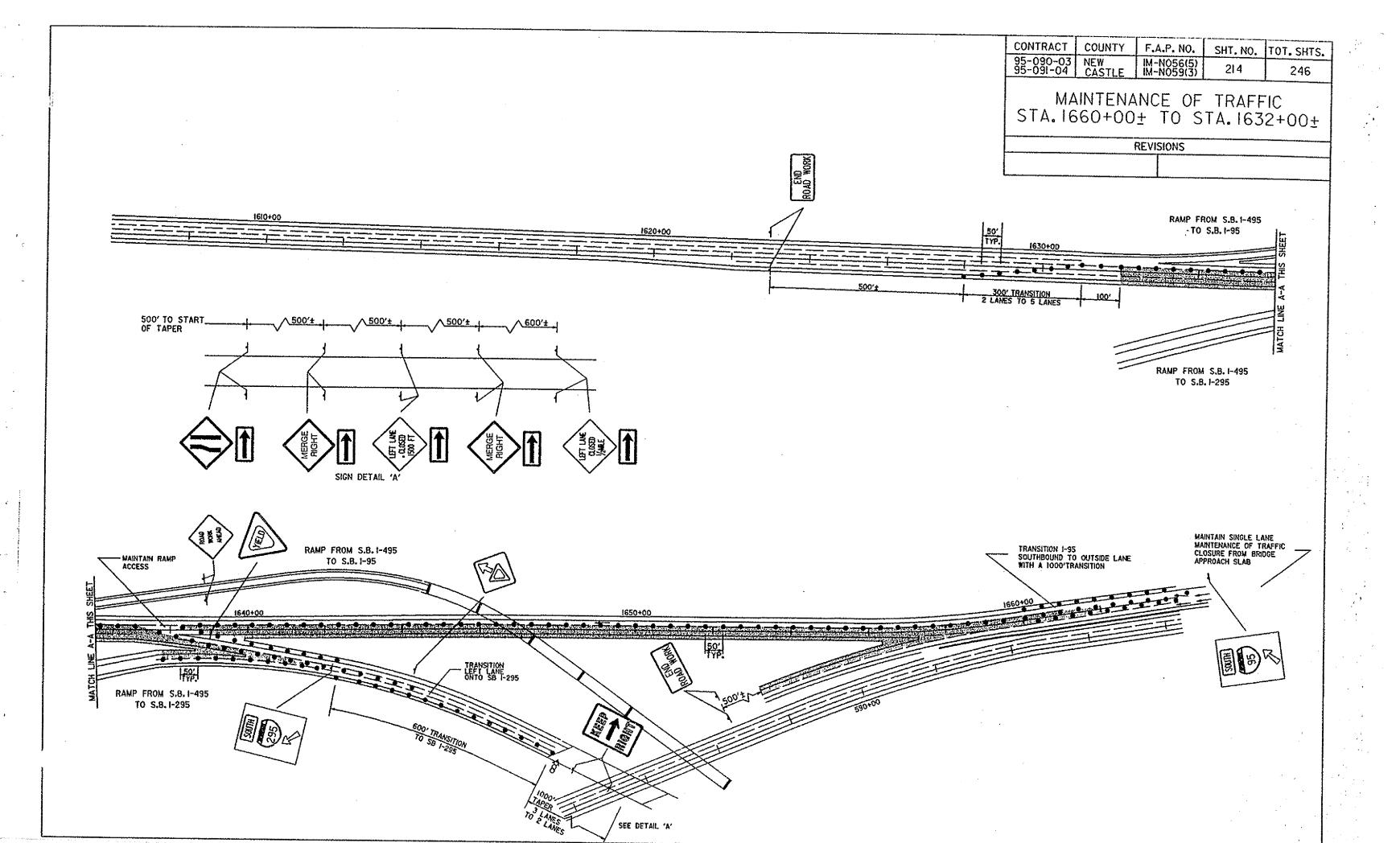


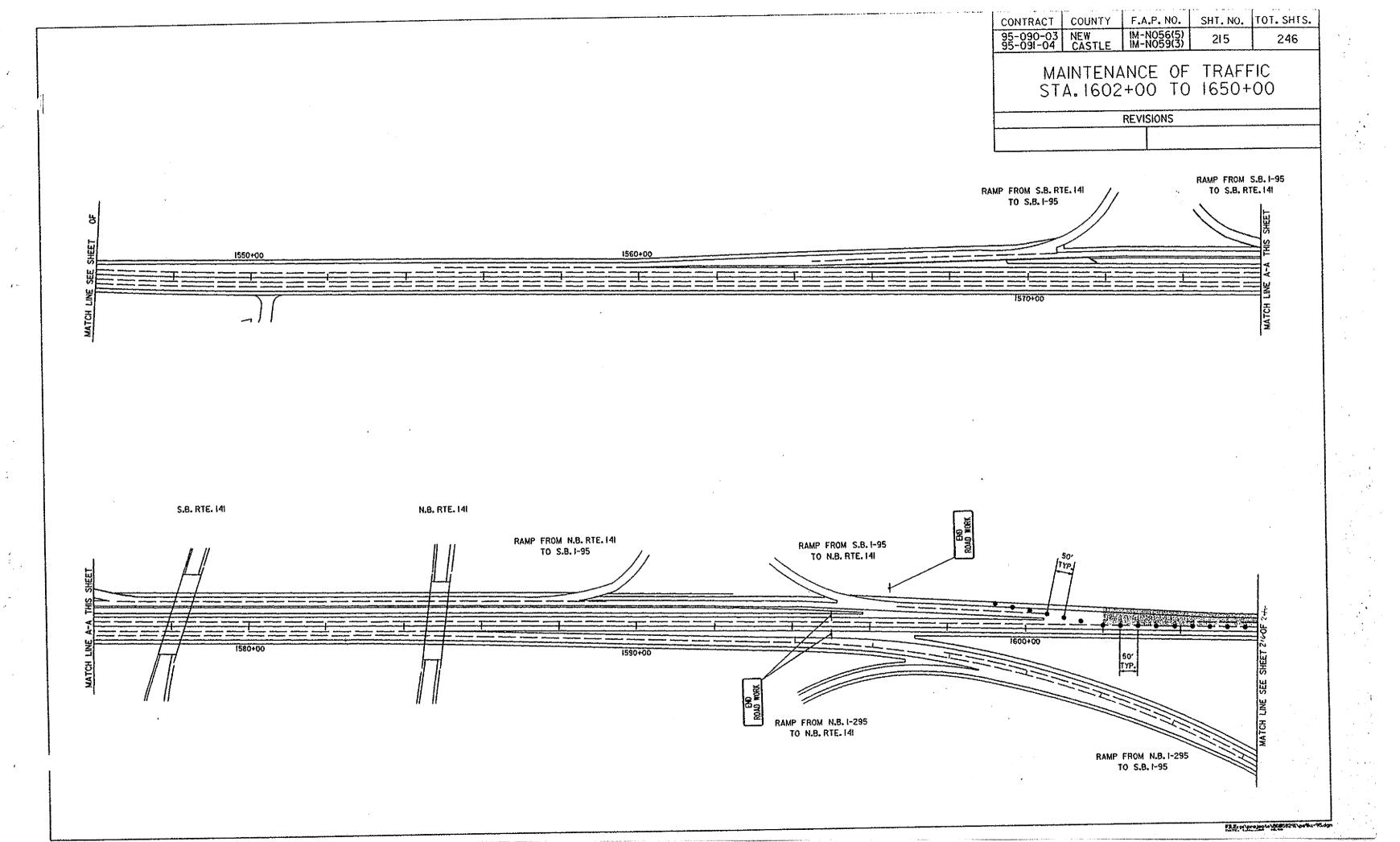


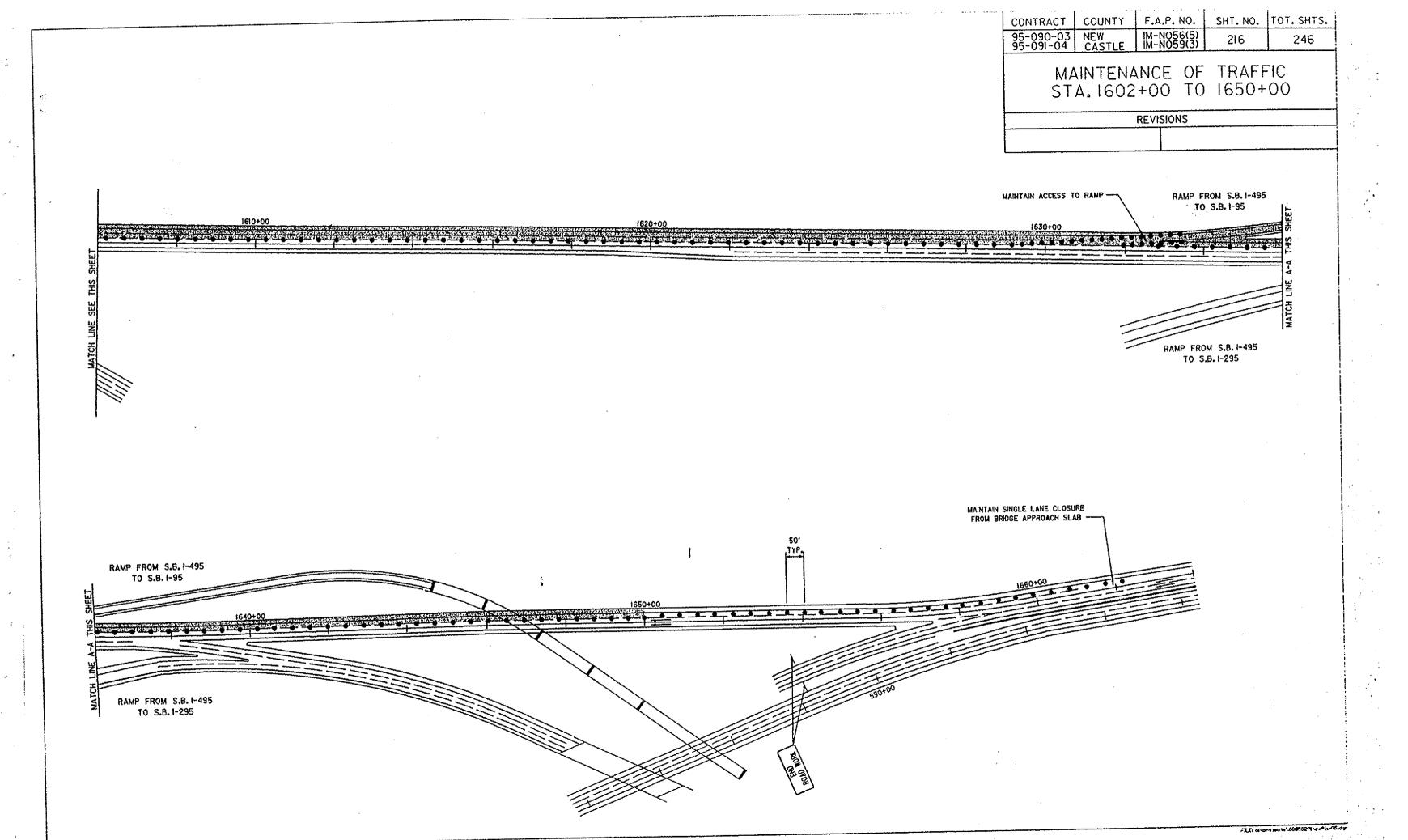


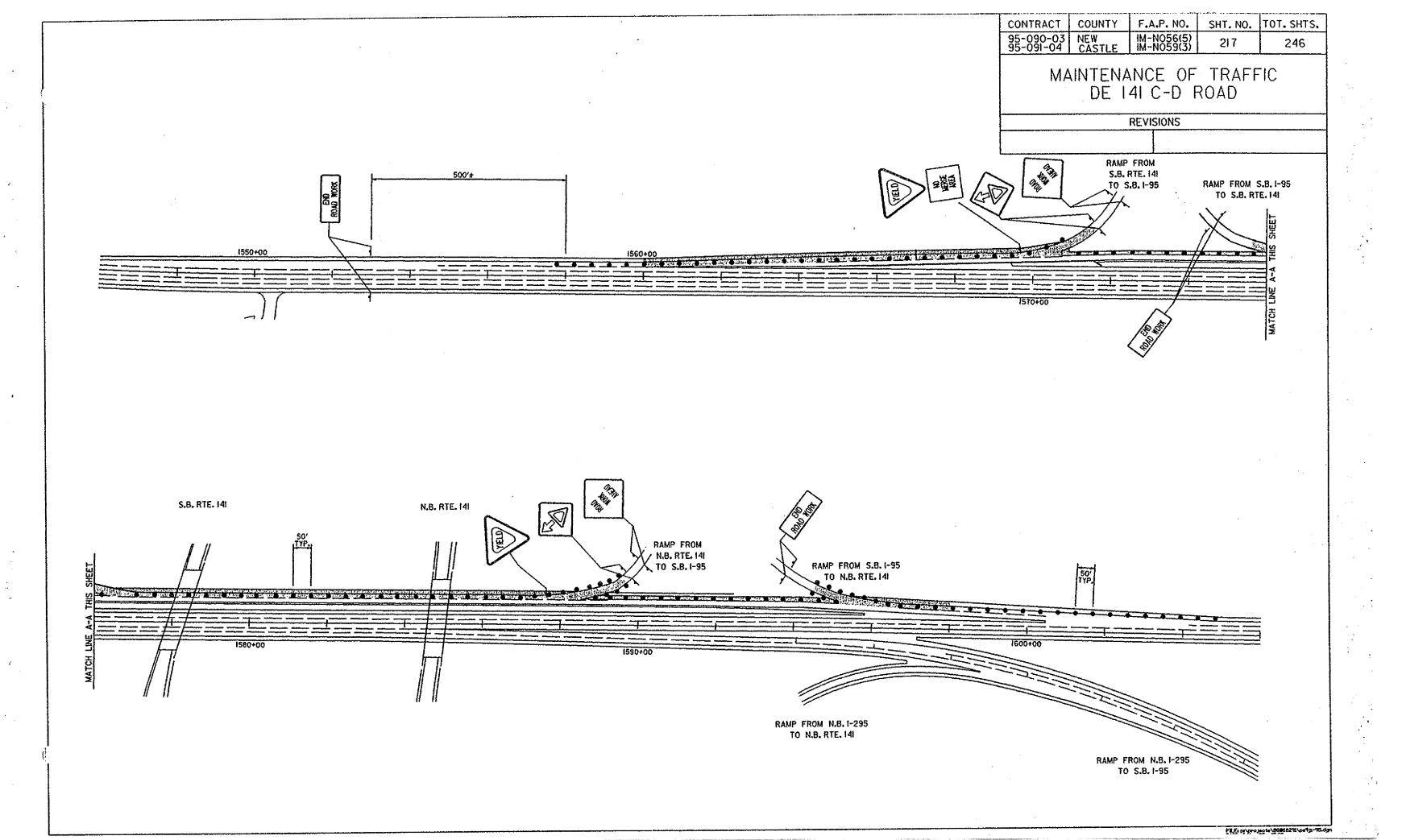


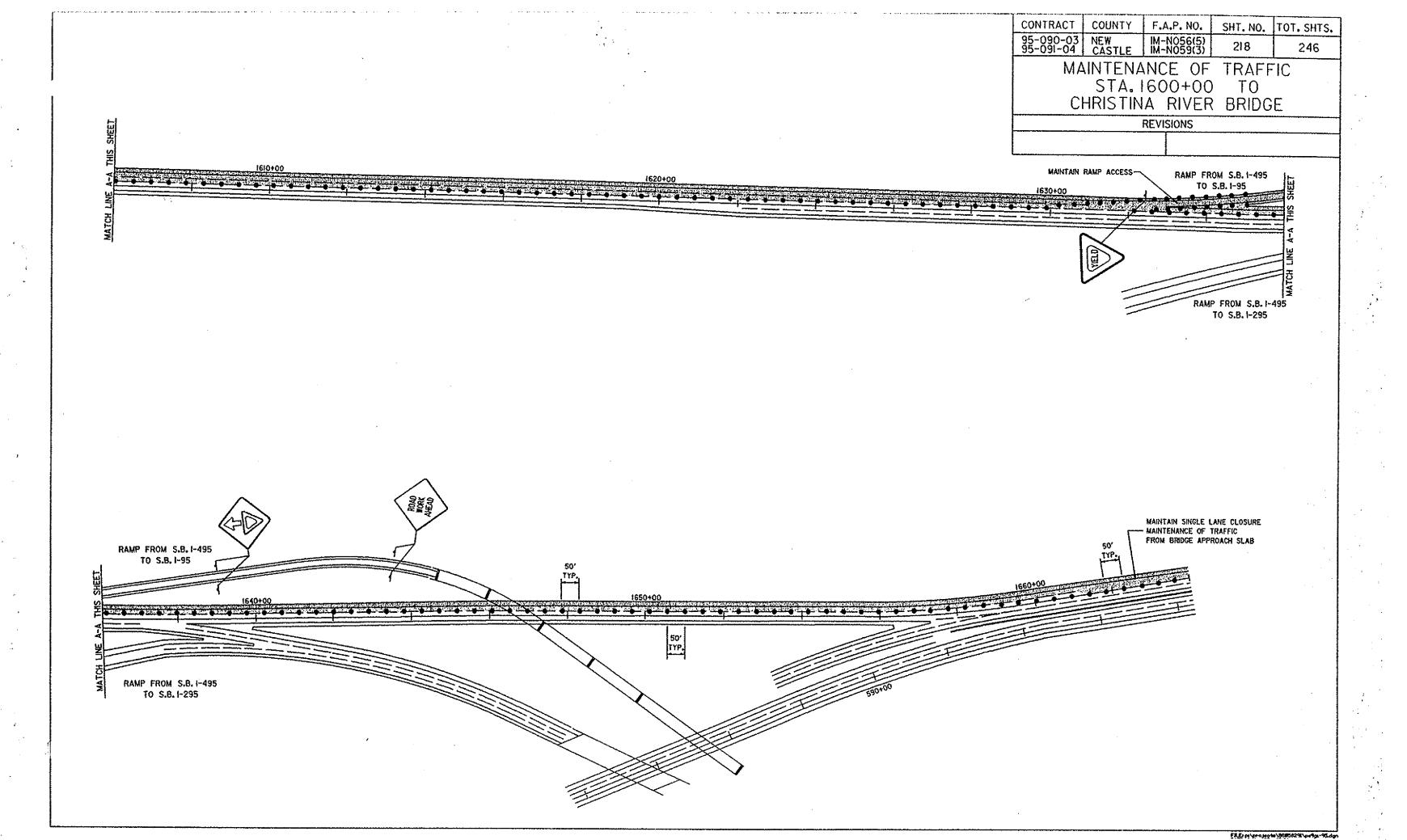


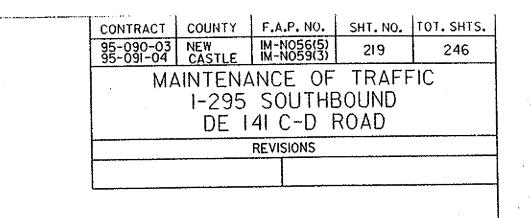


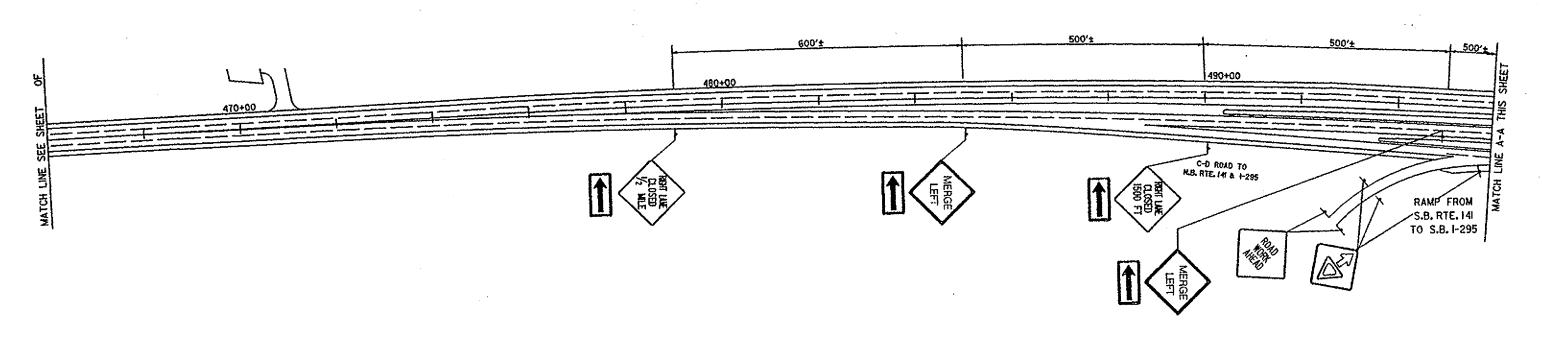


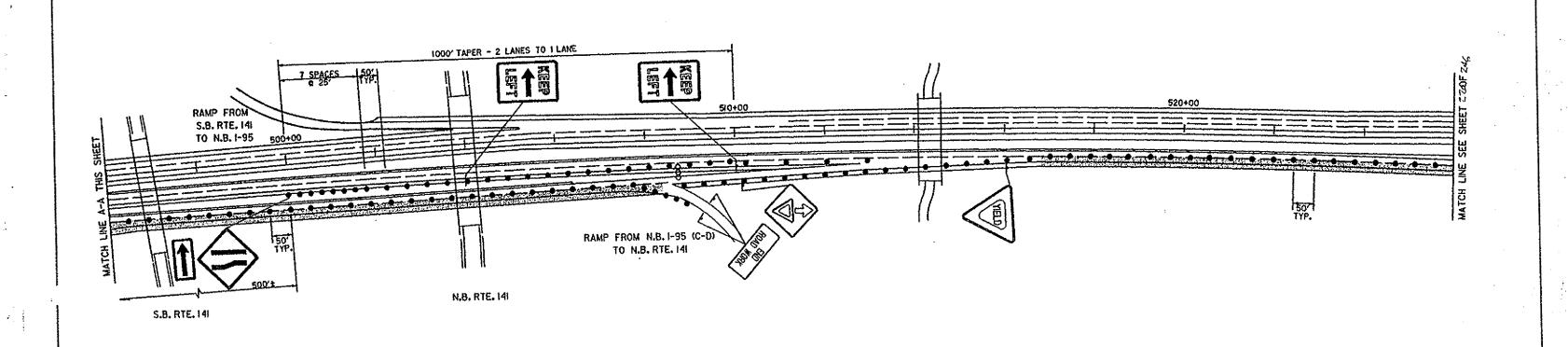


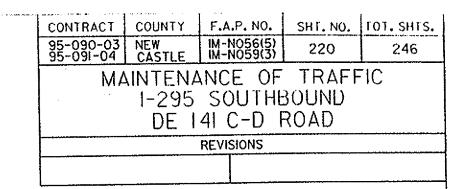


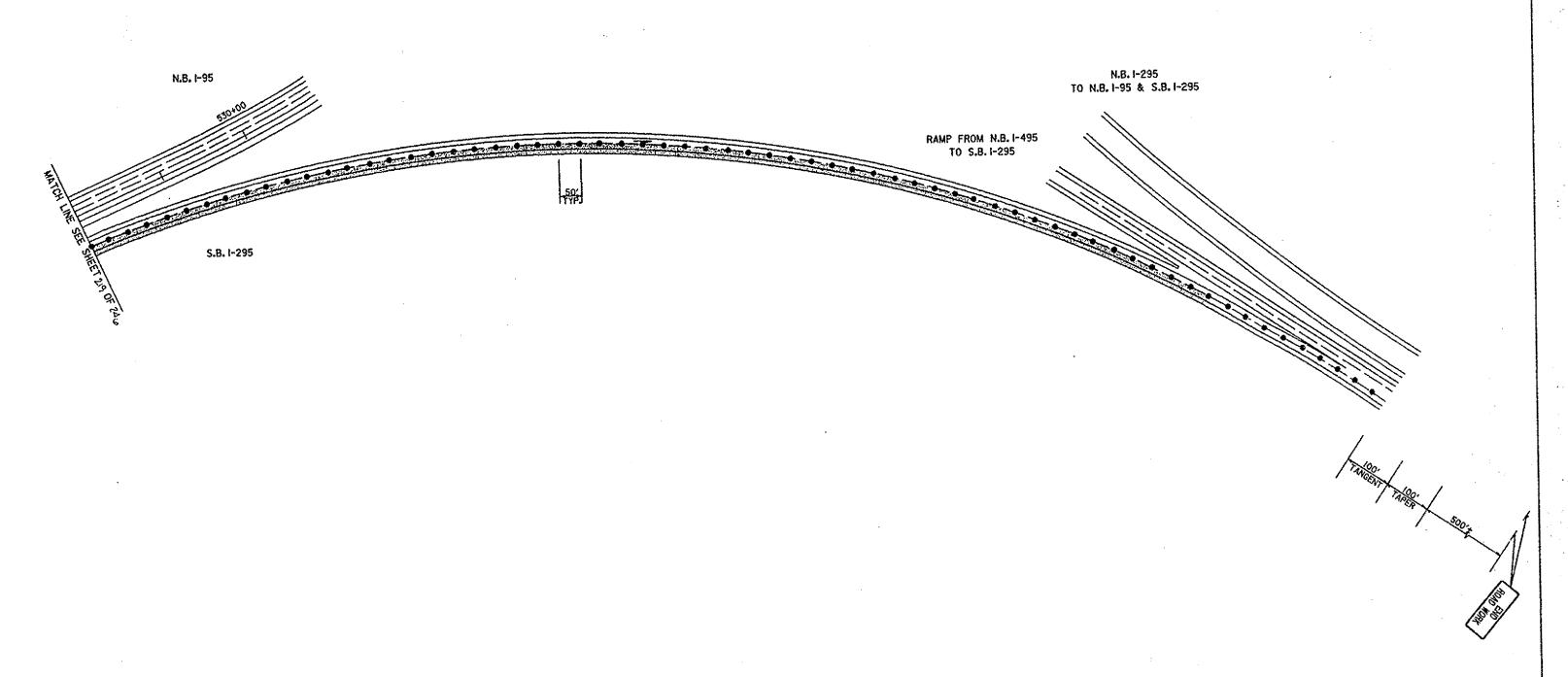


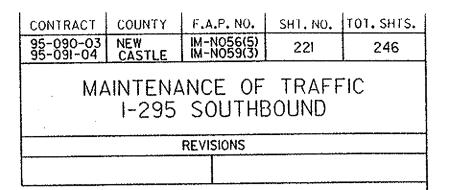


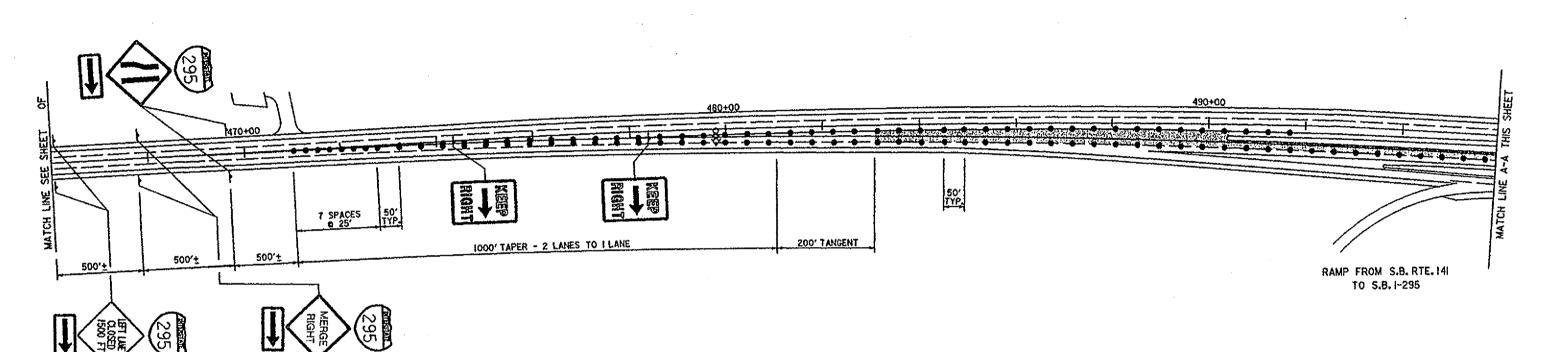


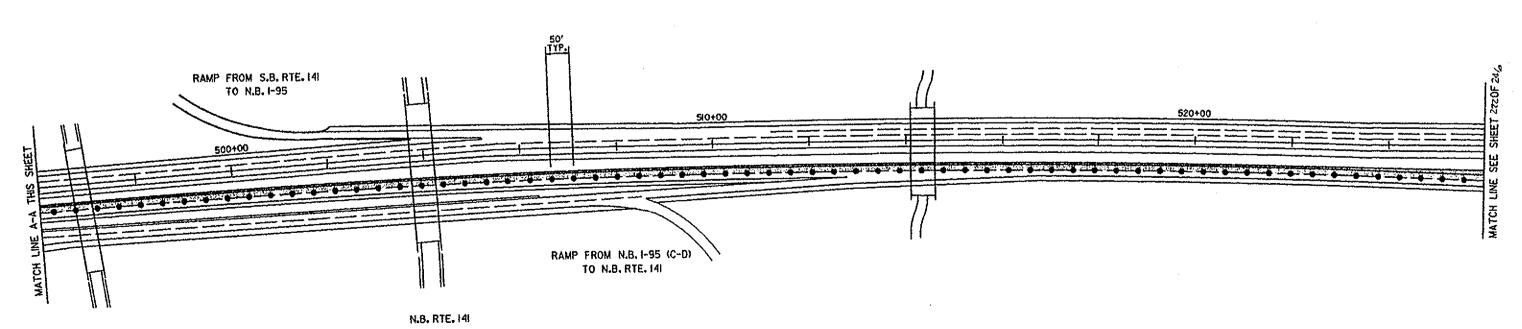




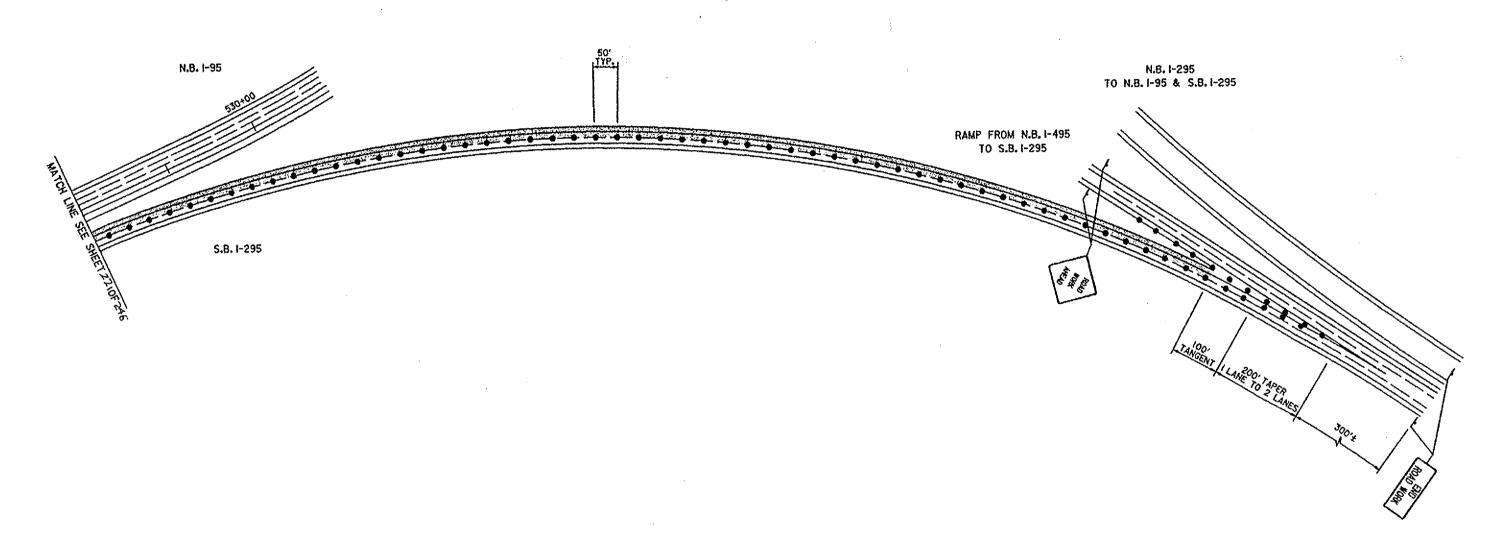


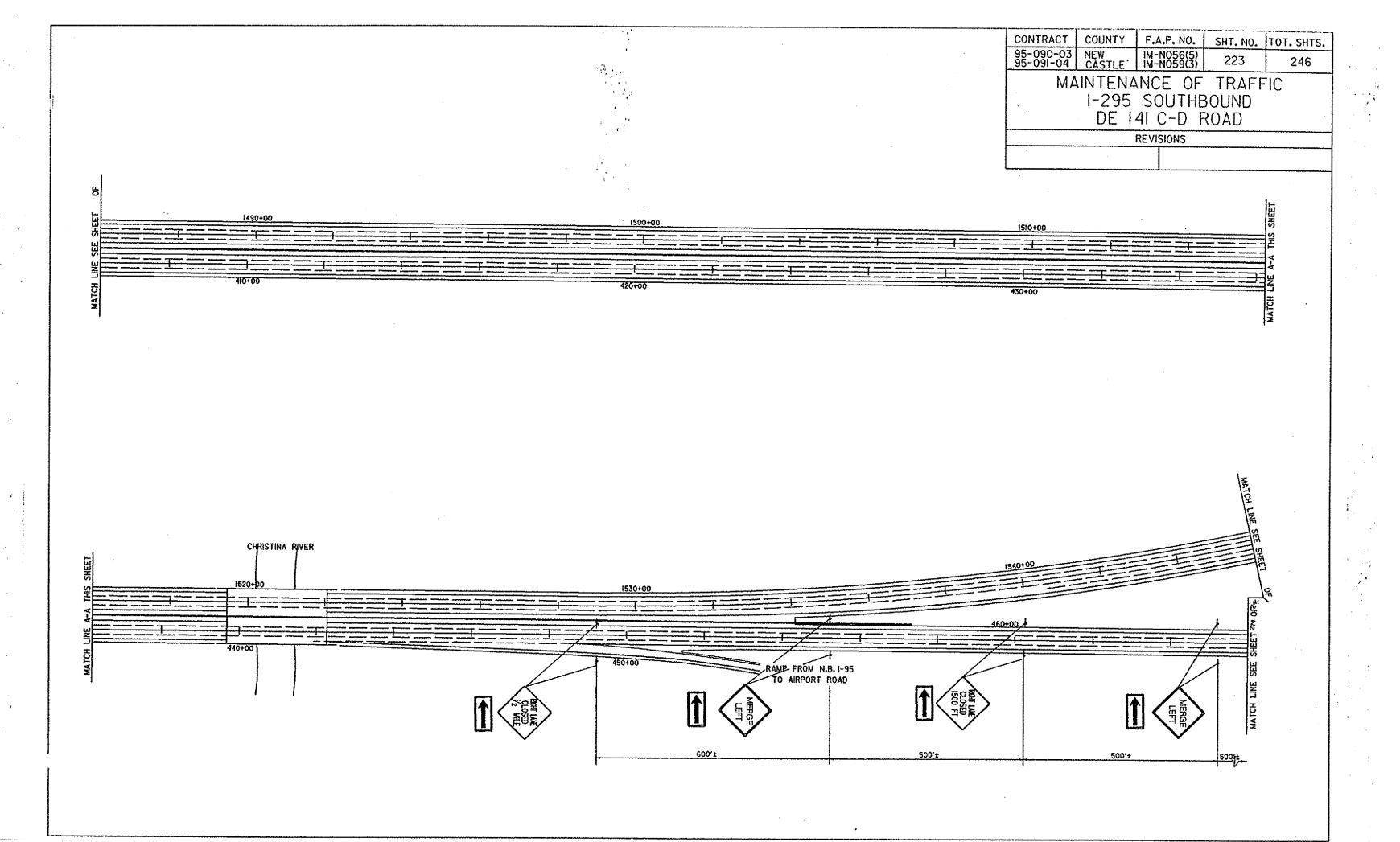


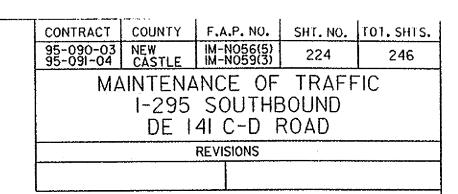


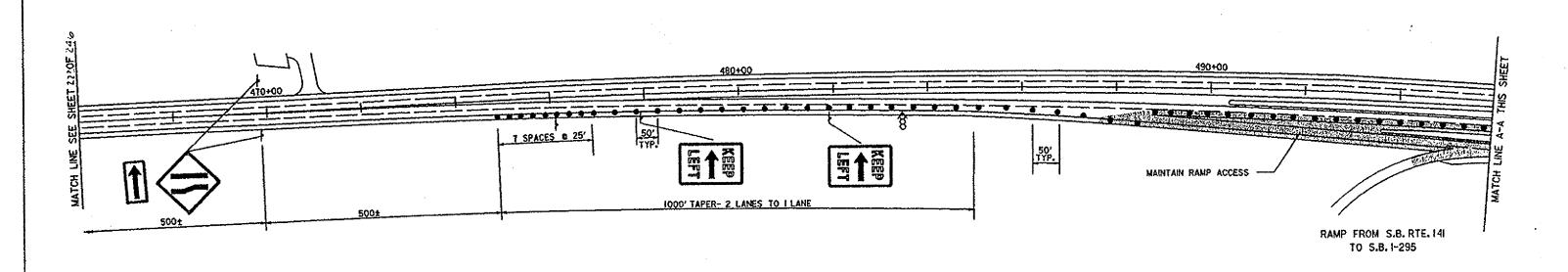


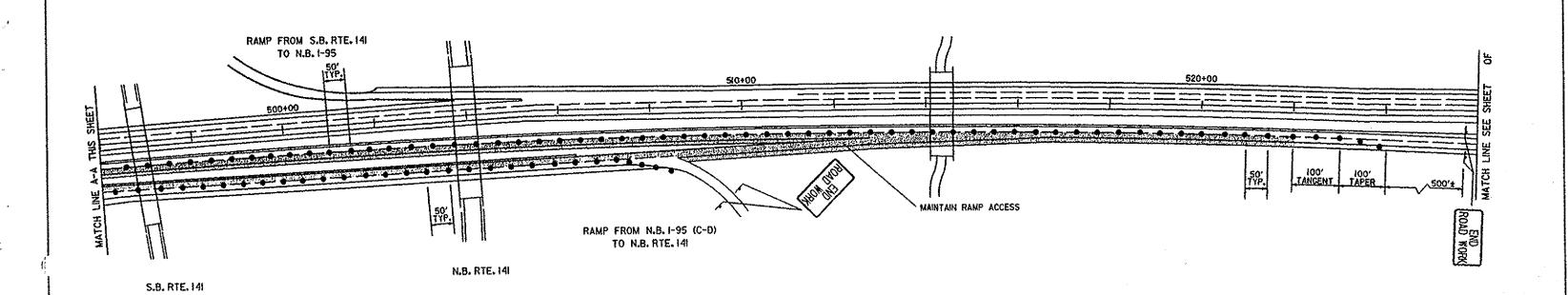
CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHTS.
95-090-03 95-091-04	NEW CASTLE	IM-N056(5) IM-N059(3)	222	246
M A		NCE OF SOUTHE		FIC
	****	REVISIONS		
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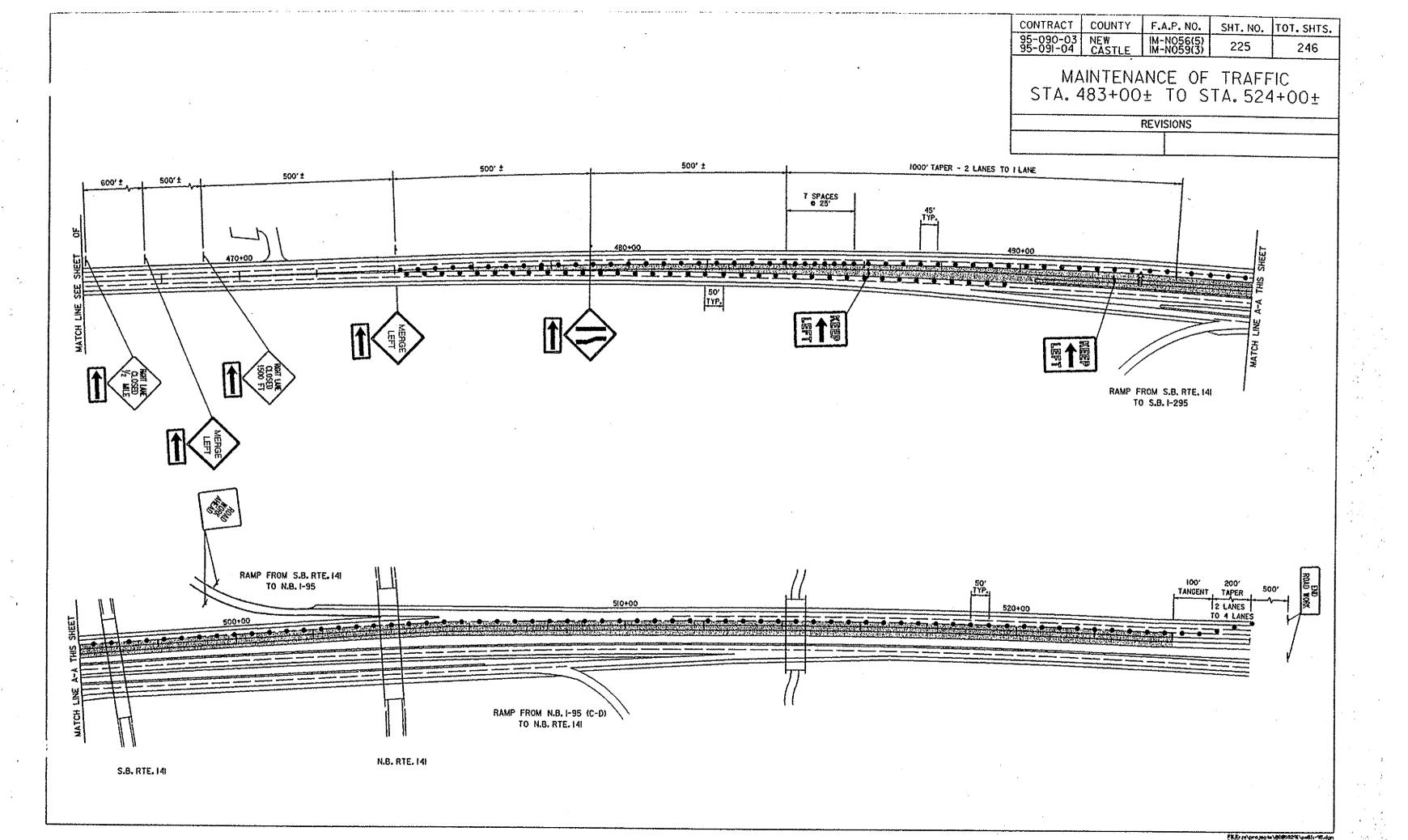




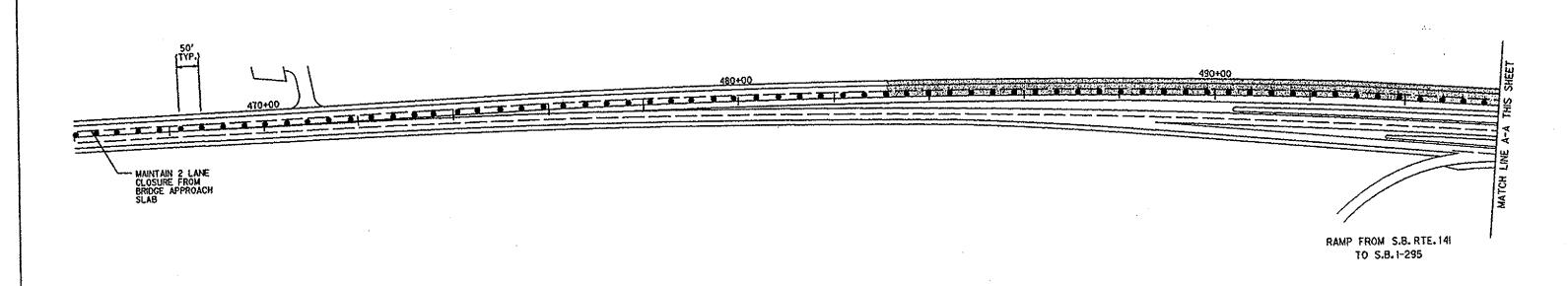


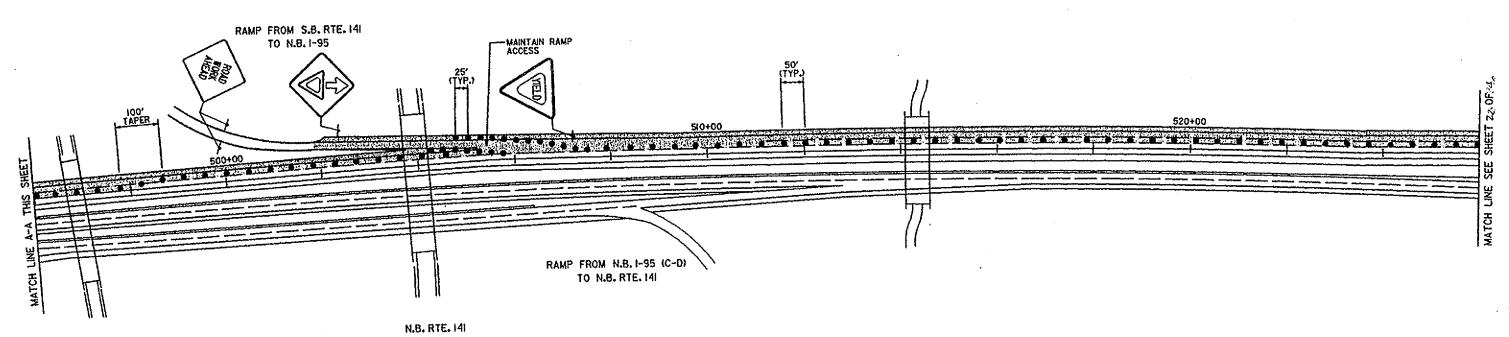






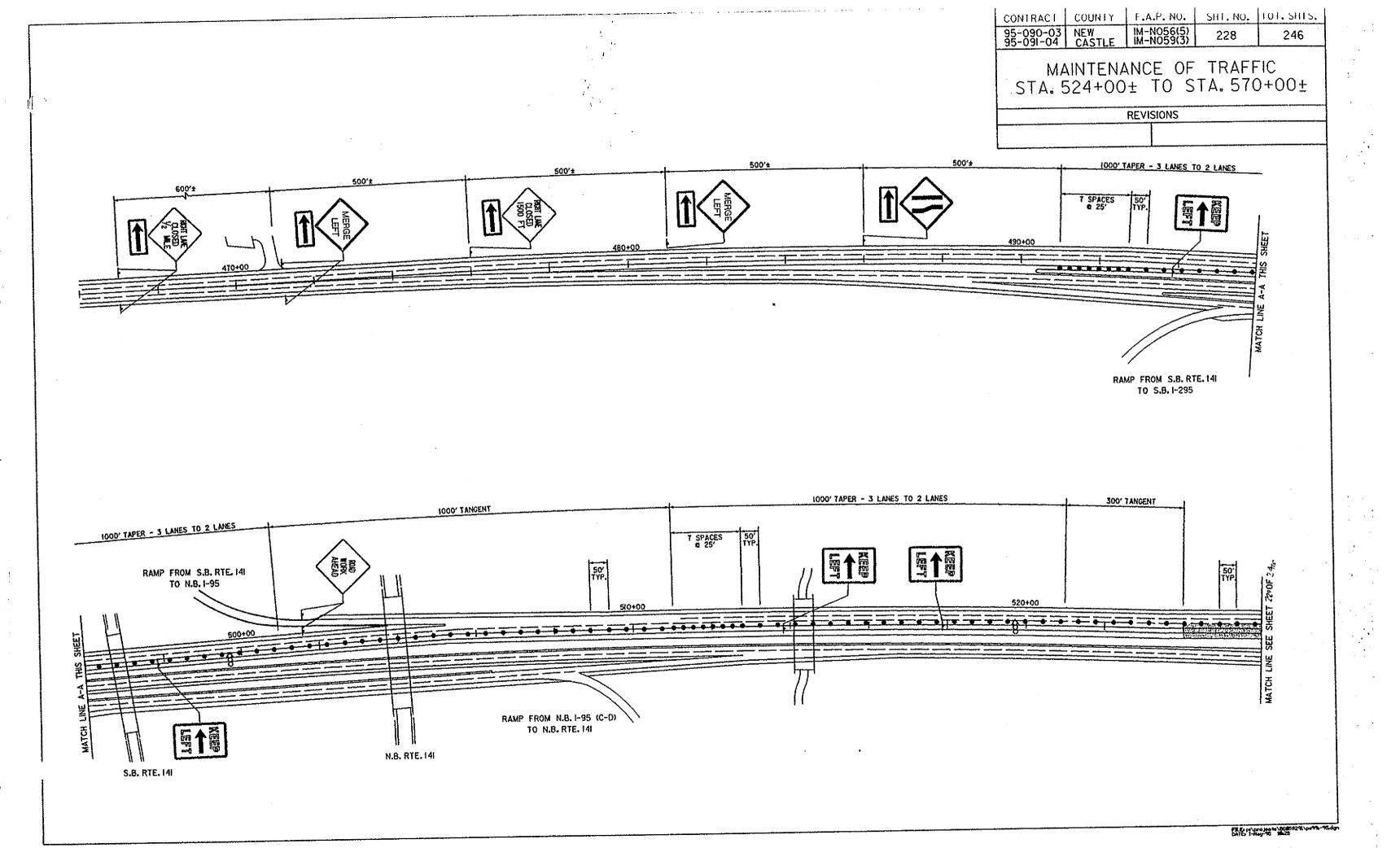
Y IM-NO STLE IM-NO	056( <u>5)</u> 059(3)	226	246		
MAINTENANCE OF TRAFFIC STA. 483+00 TO STA. 527+00					
	3+00 T		3+00 TO STA. 527		



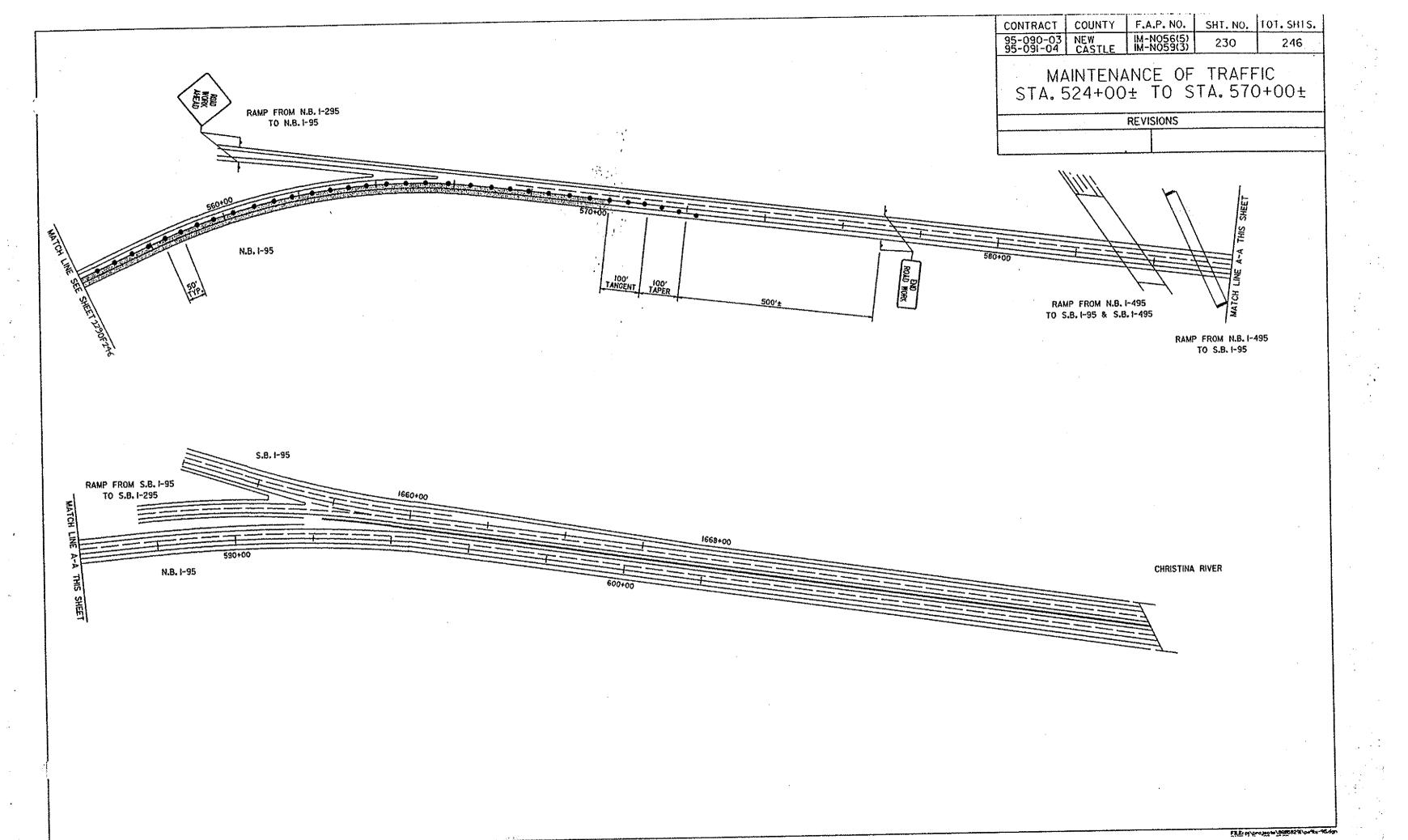


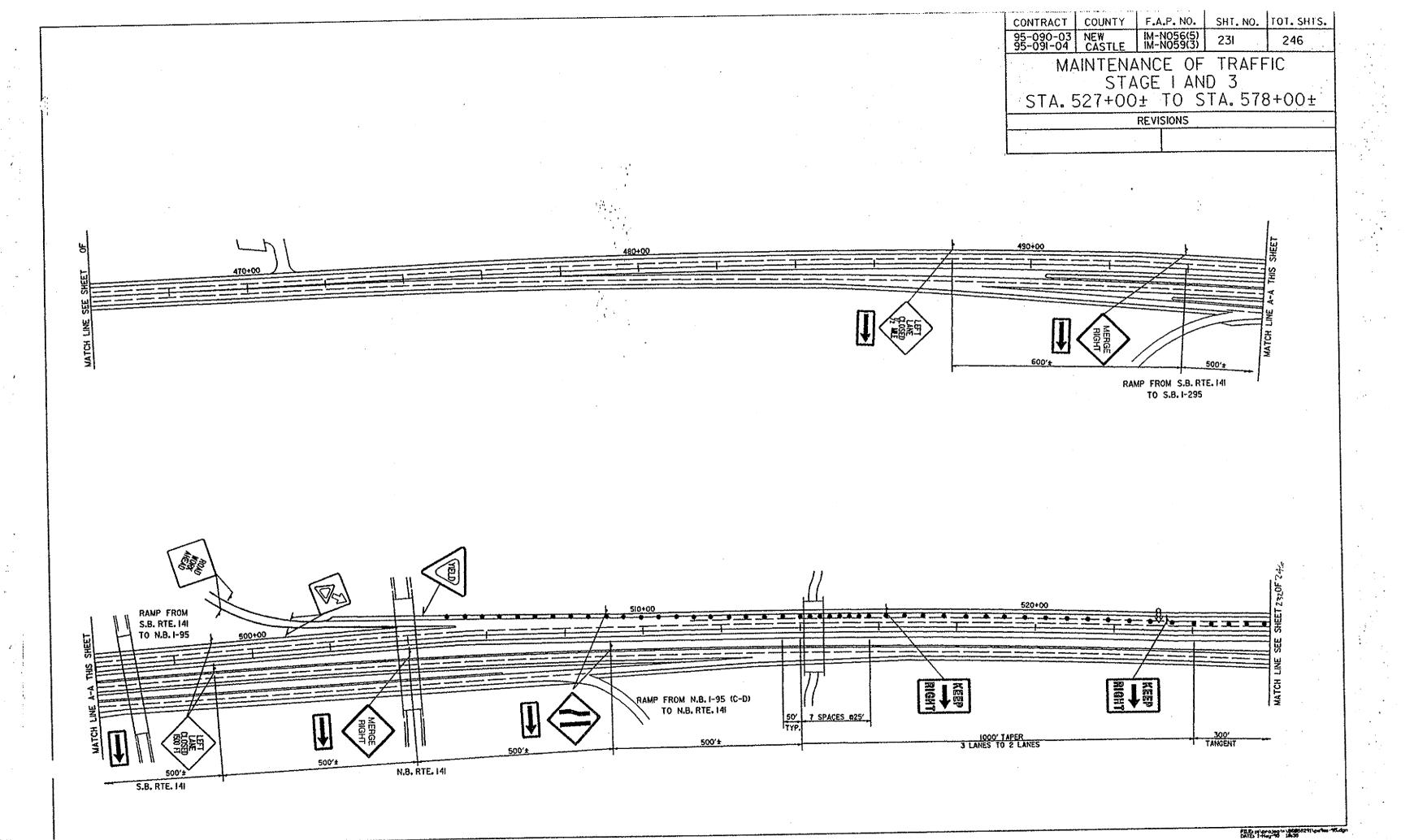
S.B. RTE. 141

CONTRACT COUNTY F.A.P. NO. 95-090-03 NEW IM-N056(5) 95-091-04 CASTLE IM-N059(3) SHT. NO. TOT. SHTS. MAINTENANCE OF TRAFFIC STA. 483+00 TO STA. 527+00 REVISIONS RAMP FROM S.B. 1-95 &N.B. 1-495 TO S.B. 1-295 RAMP FROM N.B. I-295 TO N.B. I-95 RAMP FROM N.B. 1-95 TO S.B. 1-495

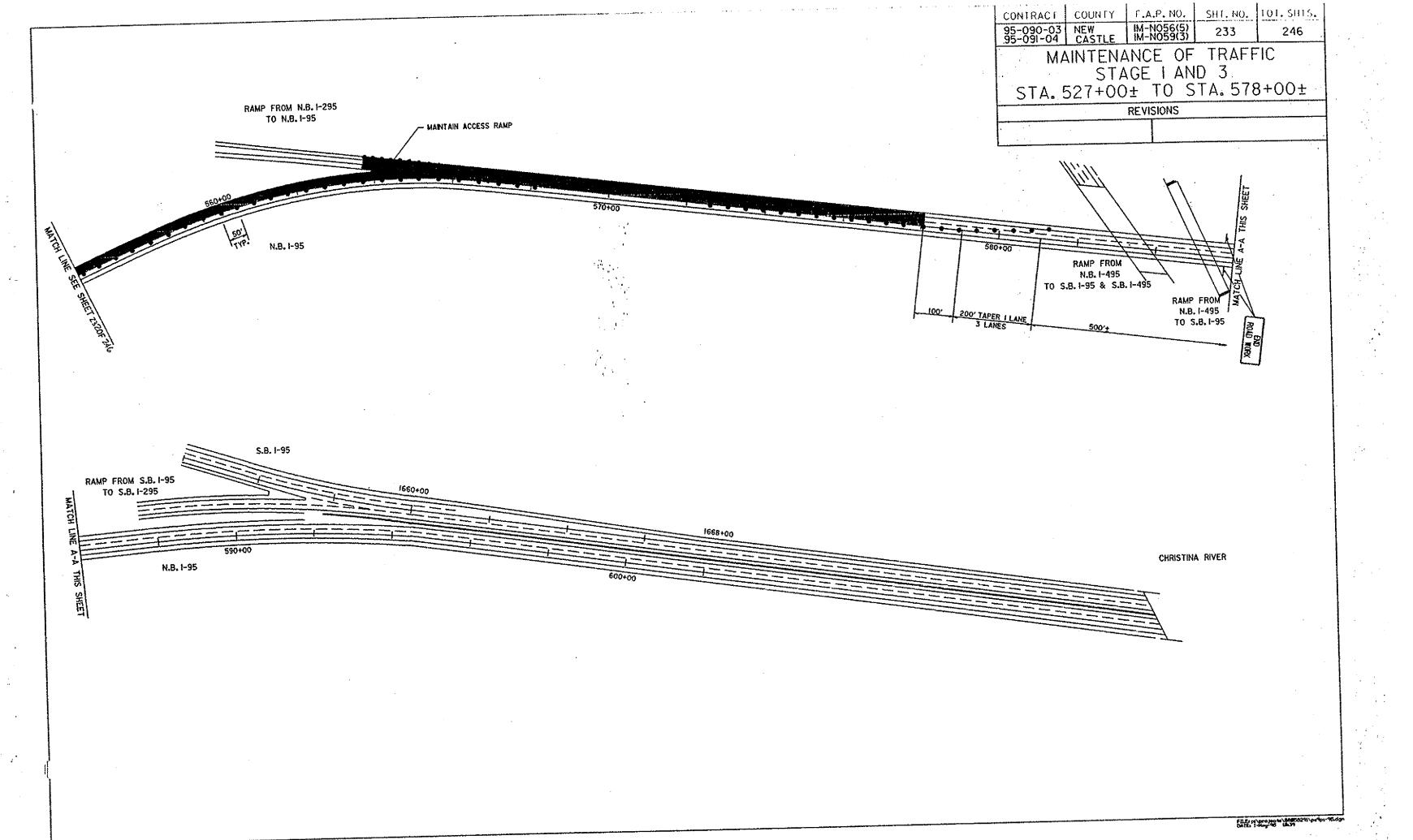


CONTRACT COUNTY F.A.P. NO. SHT. NO. TOT. SHTS. MAINTENANCE OF TRAFFIC STA. 524+00± TO STA. 570+00± · REVISIONS RAMP FROM S.B. 1-95 &N.B. 1-495 TO. S.B. 1-295 RAMP FROM N.B. I-295 TO N.B. I-95 RAMP FROM N.B. 1-95 TO S.B. 1-495





CONTRACT COUNTY F.A.P. NO. SHT. NO. TOT. SHTS. 95-090-03 NEW IM-N056(5) 95-091-04 CASTLE IM-N059(3) MAINTENANCE OF TRAFFIC STAGE I AND 3 STA. 527+00± TO STA. 578+00± REVISIONS RAMP FROM S.B. 1-95 &N.B. 1-495 TO S.B. 1-295 RAMP FROM N.B. I-295 TO N.B. I-95 RAMP FROM N.B. 1-95 TO S.B. 1-495

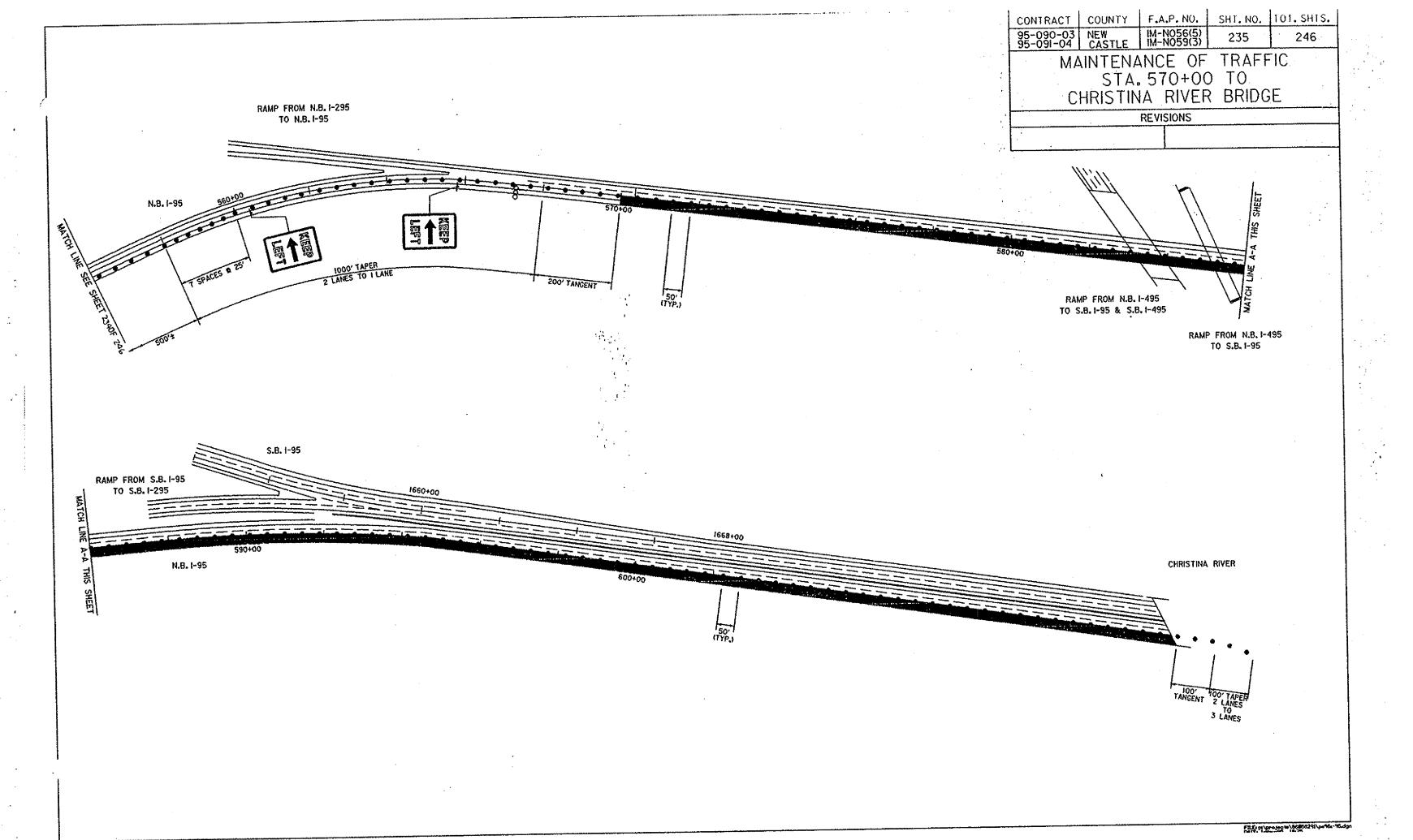


95-090-03 NEW 95-091-04 CASTLE MAINTENANCE OF TRAFFIC STA. 570+00 TO CHRISTINA RIVER BRIDGE REVISIONS RAMP FROM N.B. 1-95 TO S.B. 1-495 RAMP FROM S.B. 1-95 &N.B. 1-495 TO S.B. 1-295 RAMP FROM N.B. 1-295 TO N.B. 1-95

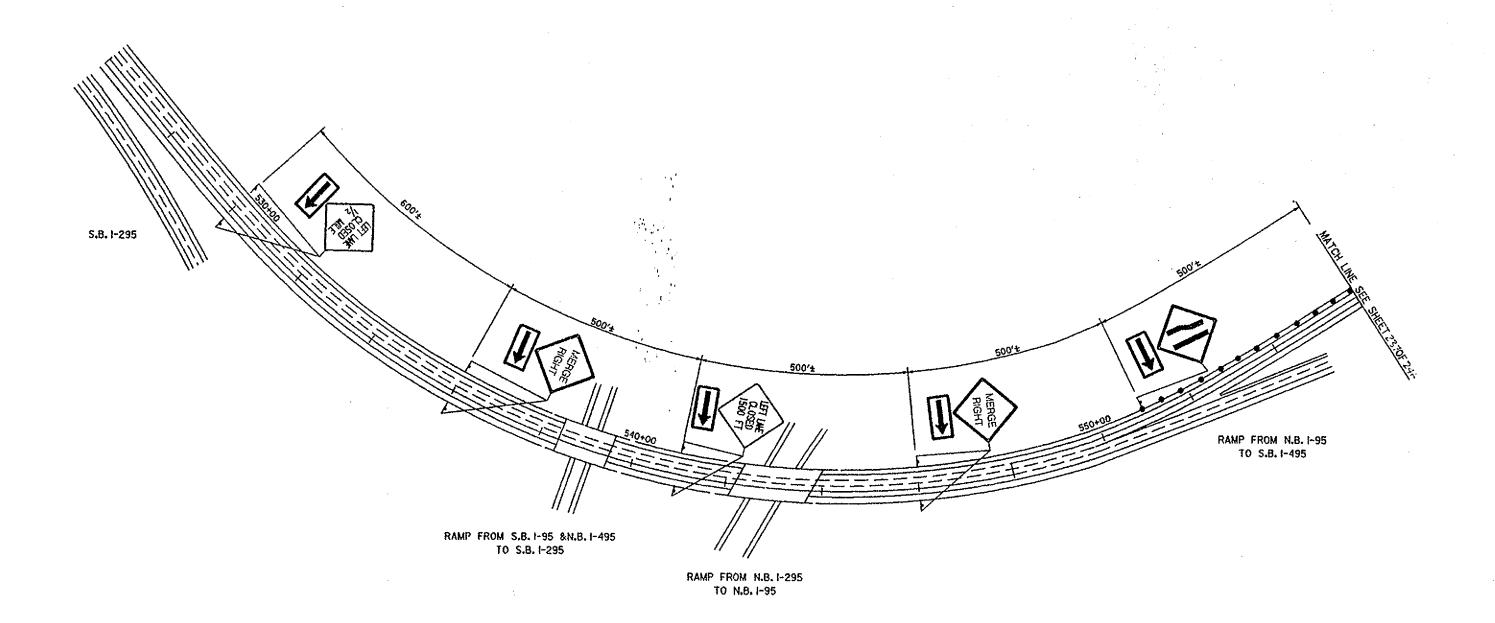
CONTRACT | COUNTY

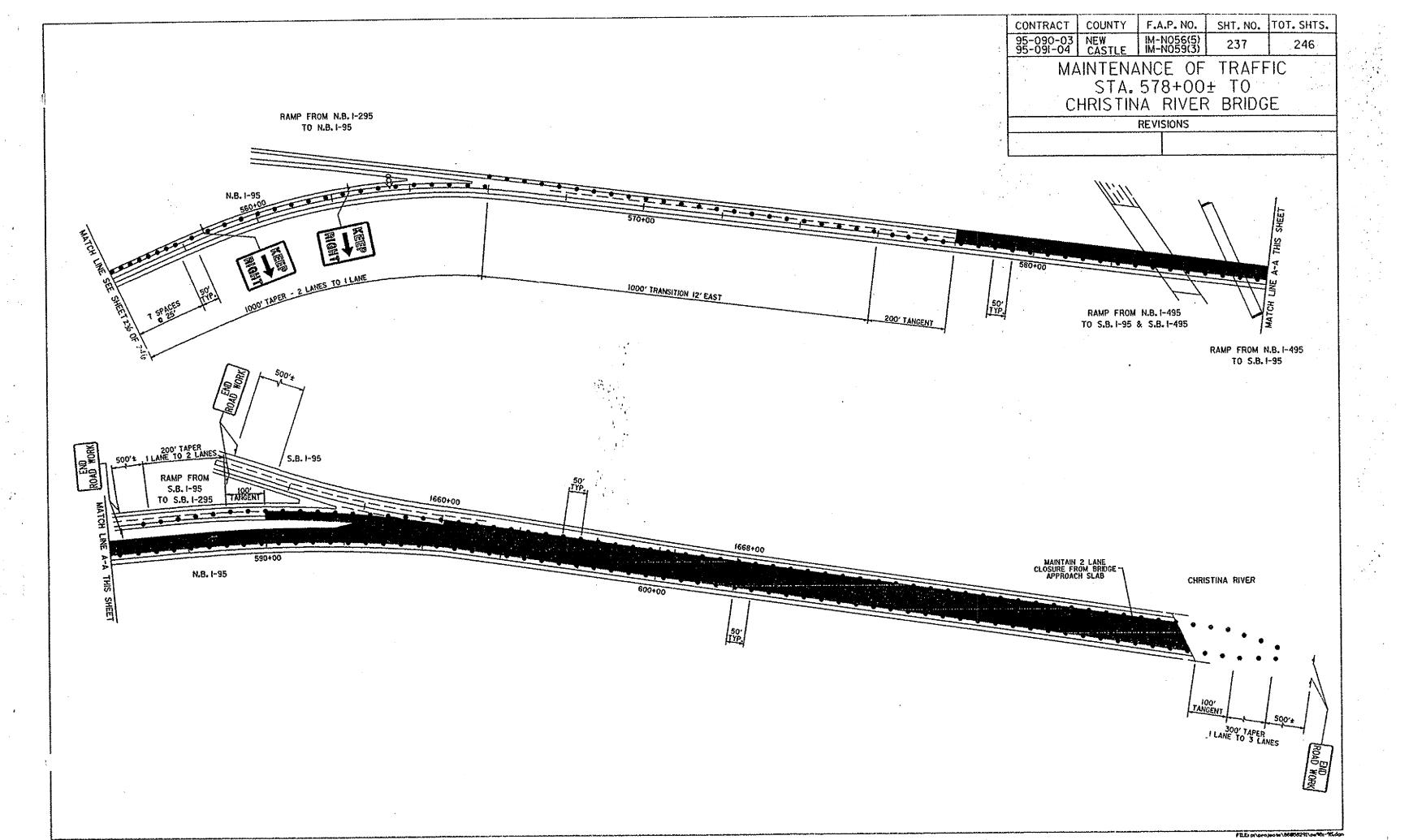
F.A.P. NO.

SHT. NO. TOT. SHTS.



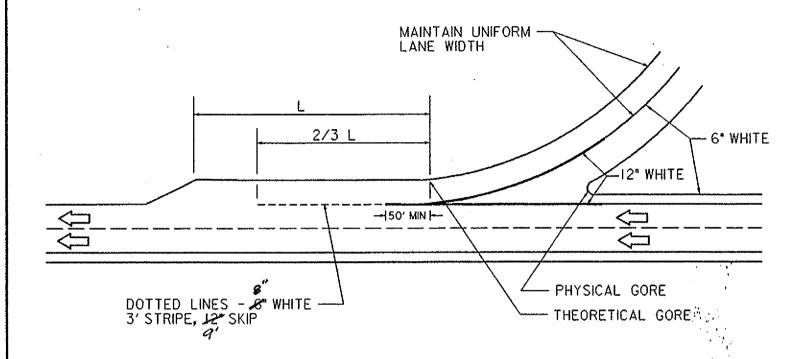
_	CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHTS.		
L	95-090-03 95-091-04	NEW CASTLE	IM-N056(5) IM-N059(3)	236	246		
	MAINTENANCE OF TRAFFIC						
	STA. 578+00± TO						
	CI	HRISTIN	IA RIVER	R BRIDG	E		
	REVISIONS						
1					3		

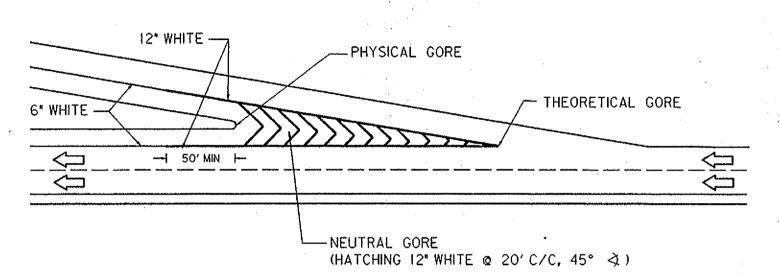


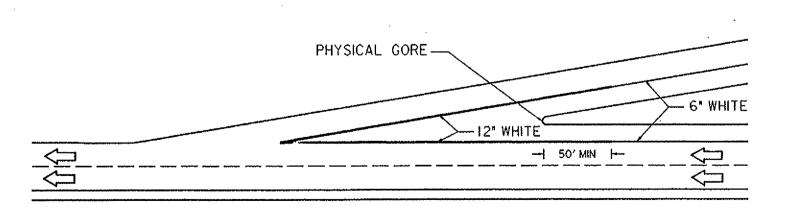


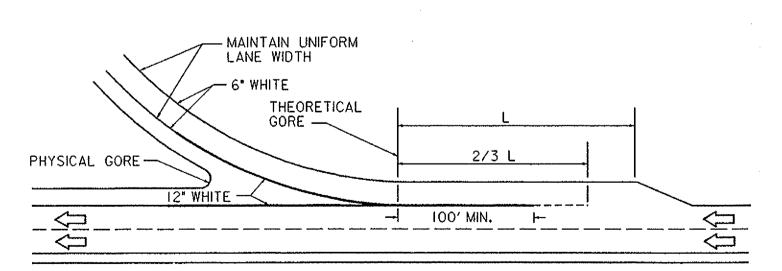
## PAVEMENT MARKING TYPICALS

CONTRACT	COUNTY	F.A.P. NO.	SHT. NO.	TOT. SHTS.	
95-090-03 95-091-04	NEW CASTLE	IM-N056(5) IM-N059(3)	238	246	
PAVEMENT MARKING TYPICALS  SHT. 1 OF 2					
REVISIONS					
	, .				







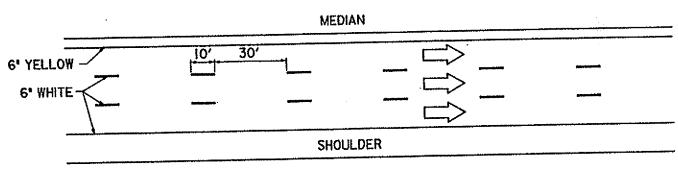


INTERCHANGE GORE MARKING
(TYPICAL ENTRANCE RAMP)

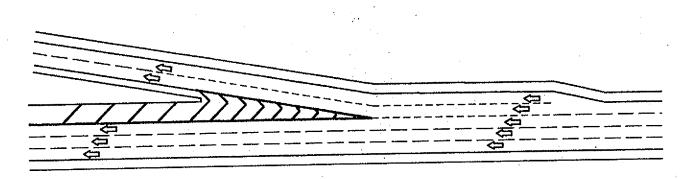
INTERCHANGE GORE MARKING
(TYPICAL EXIT RAMP)

# PAVEMENT MARKING TYPICALS

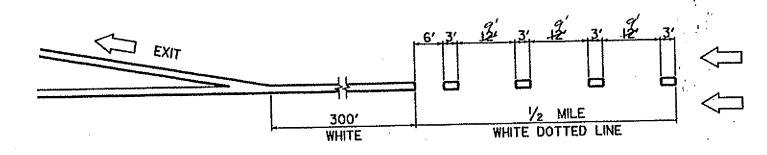
1	CONTRACT	COUNTY	F.A.P. NO.	SHI.NO.	101. SH1S.		
	95-090-03 95-091-04	NEW CASTLE	IM-N056(5) IM-N059(3)	239	246		
	PAVEMENT MARKING TYPICALS SHT. 2 OF 2						
	* *.		REVISIONS				
	, .						



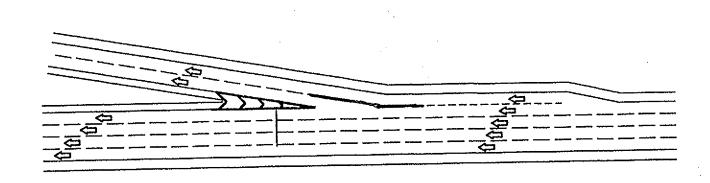
MAINLINE MARKING



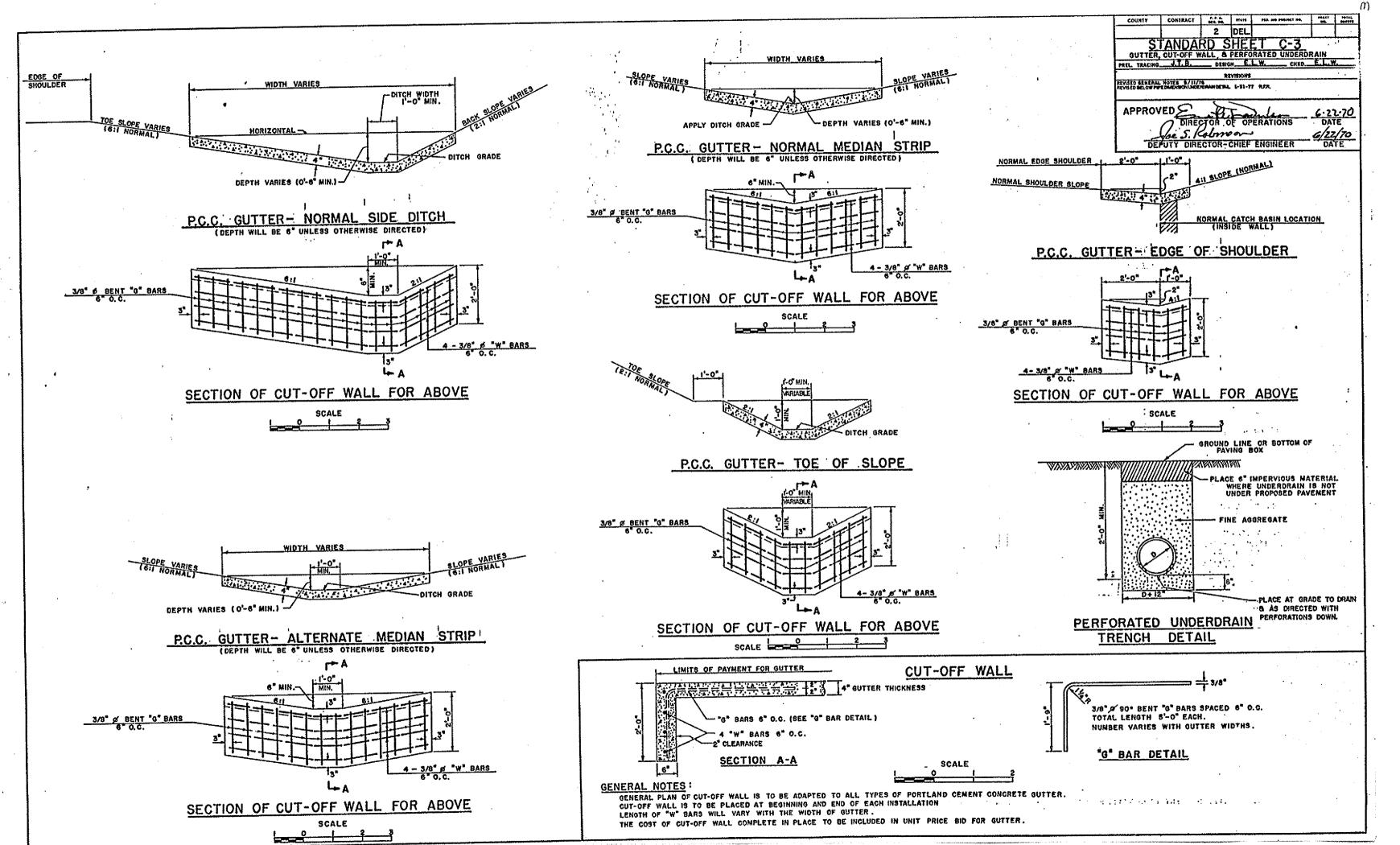
EXISTING CONDITIONS

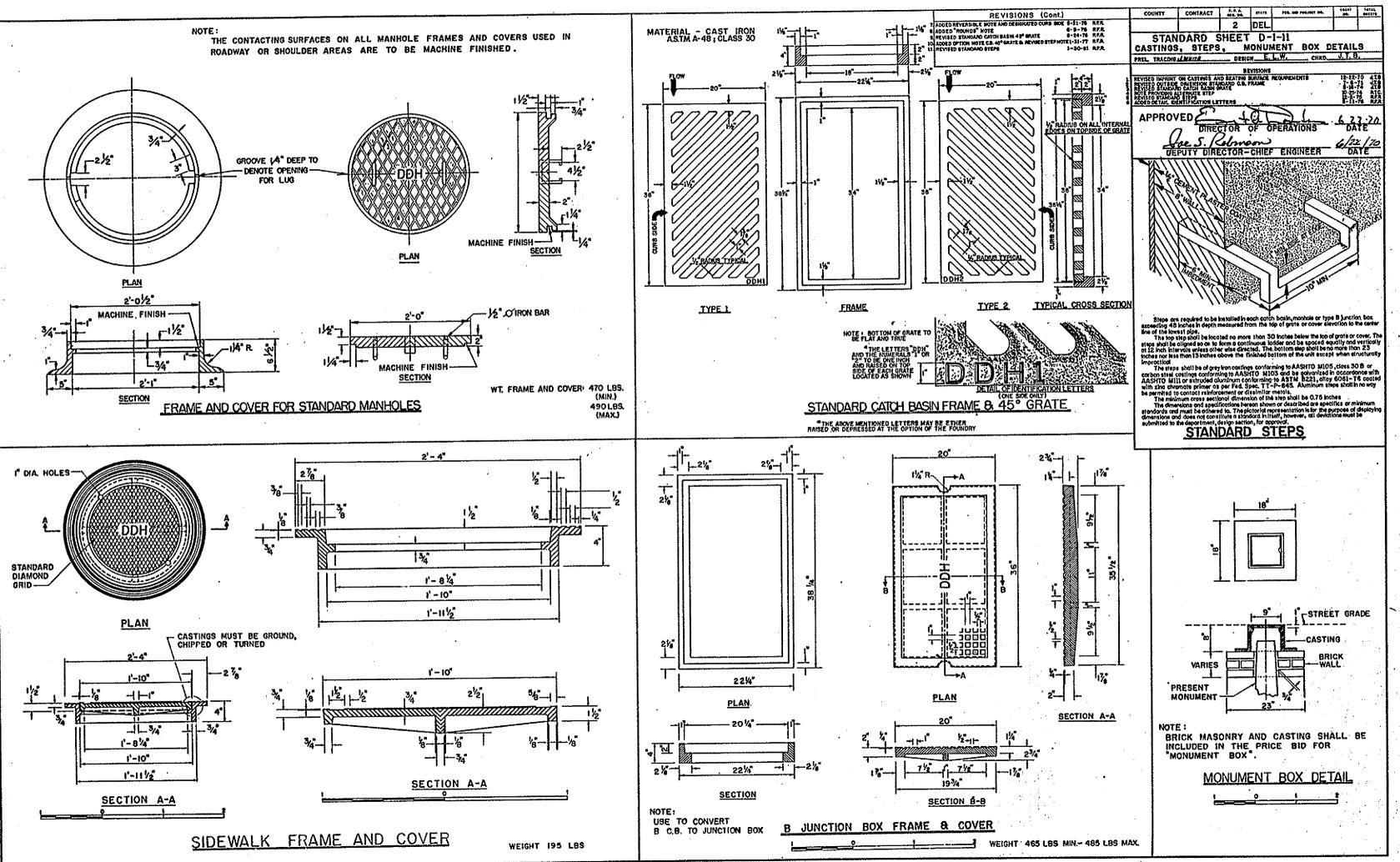


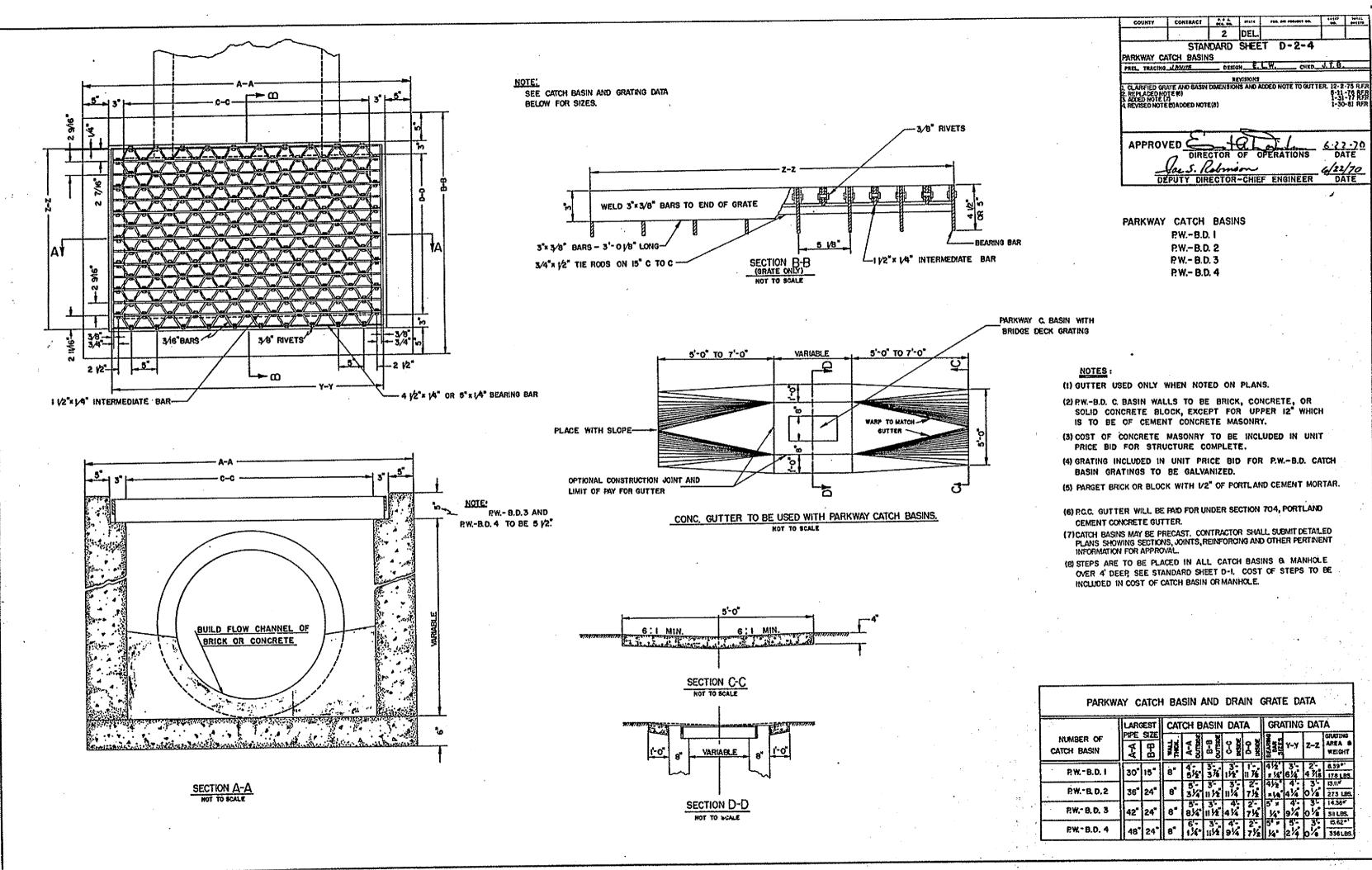
LANE DROP MARKING AT EXIT RAMP

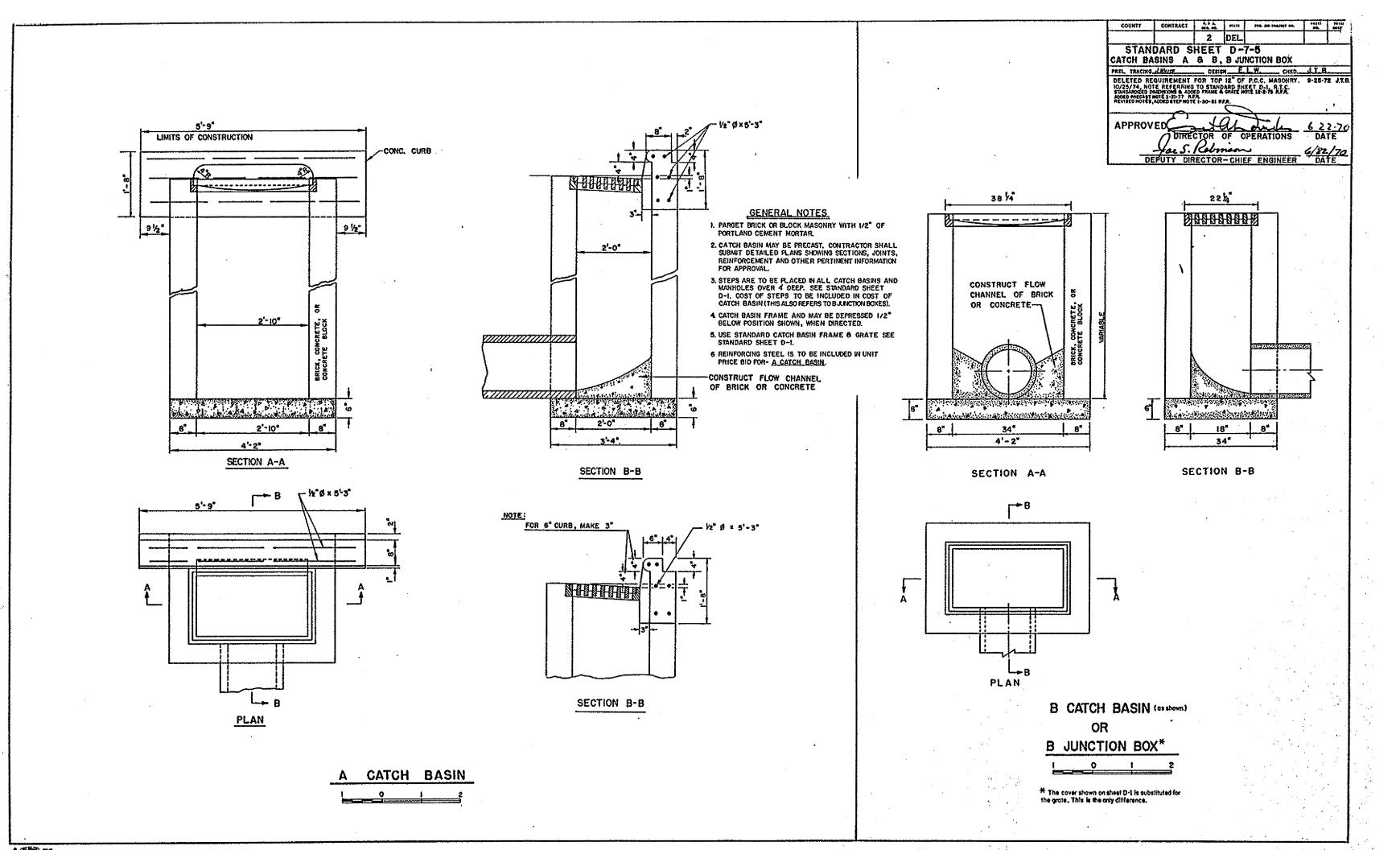


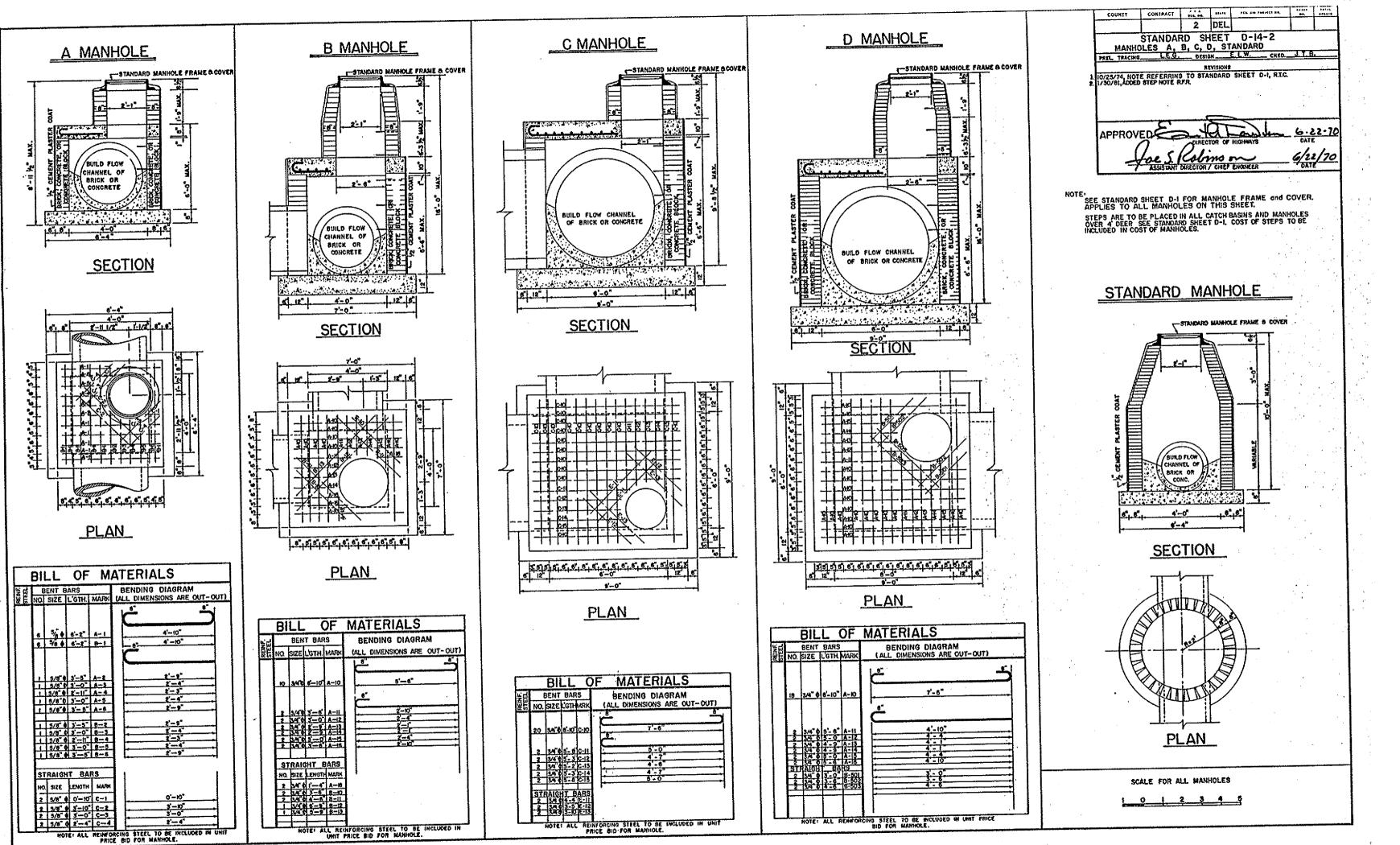
PROPOSED CONDITIONS
SOUTHBOUND 1-95 TO ROUTE 273

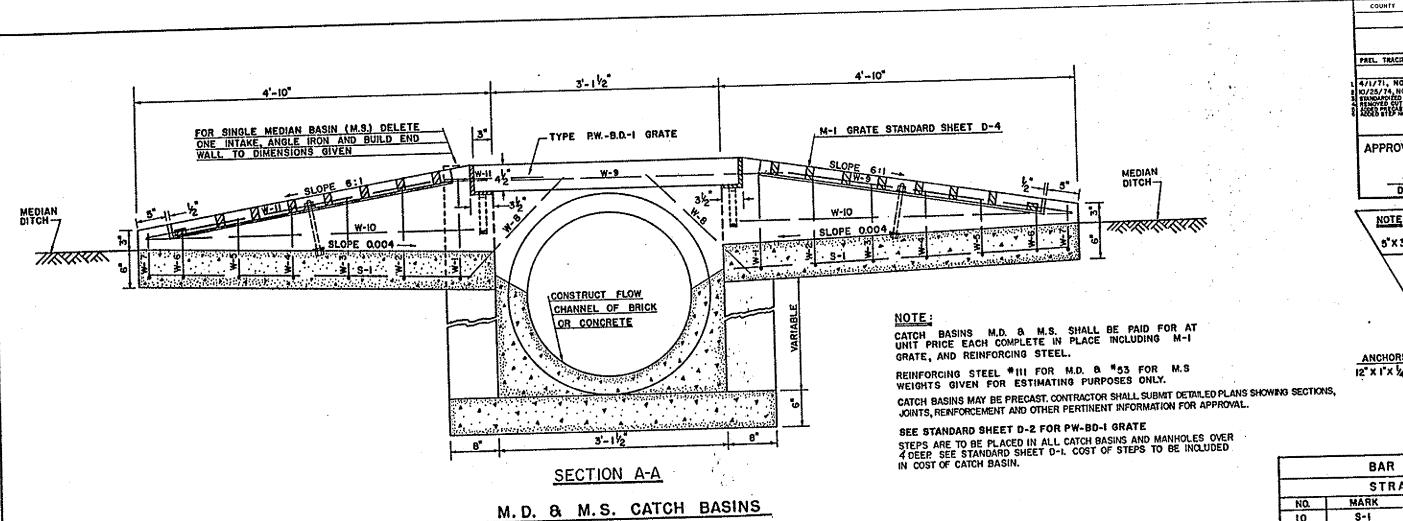


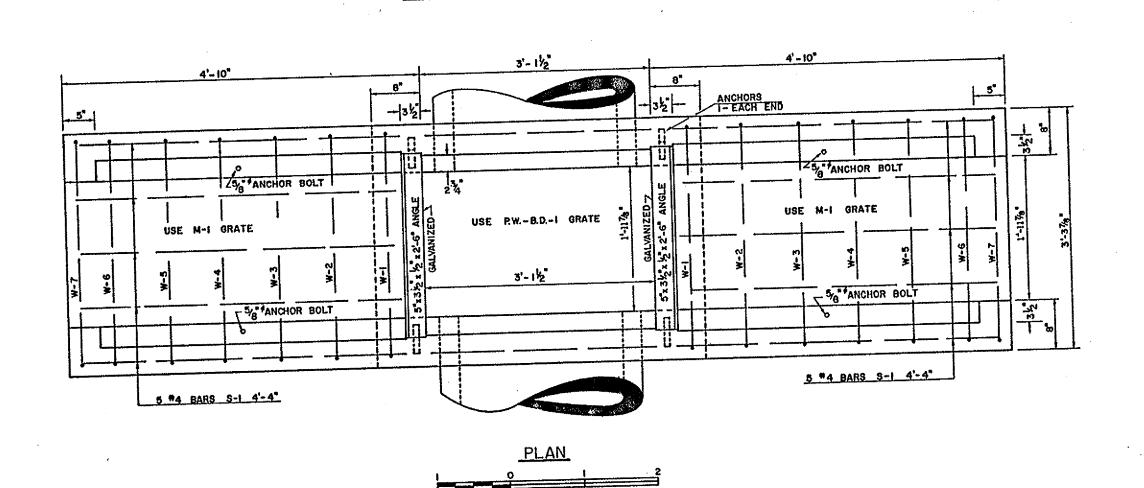


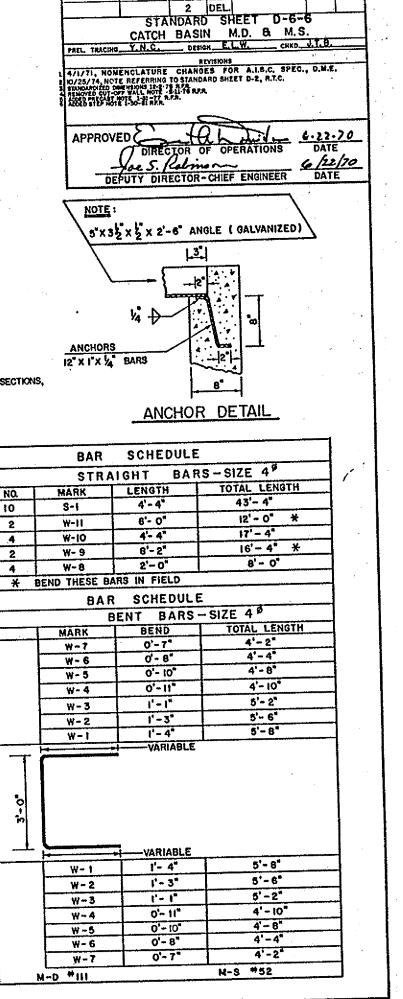






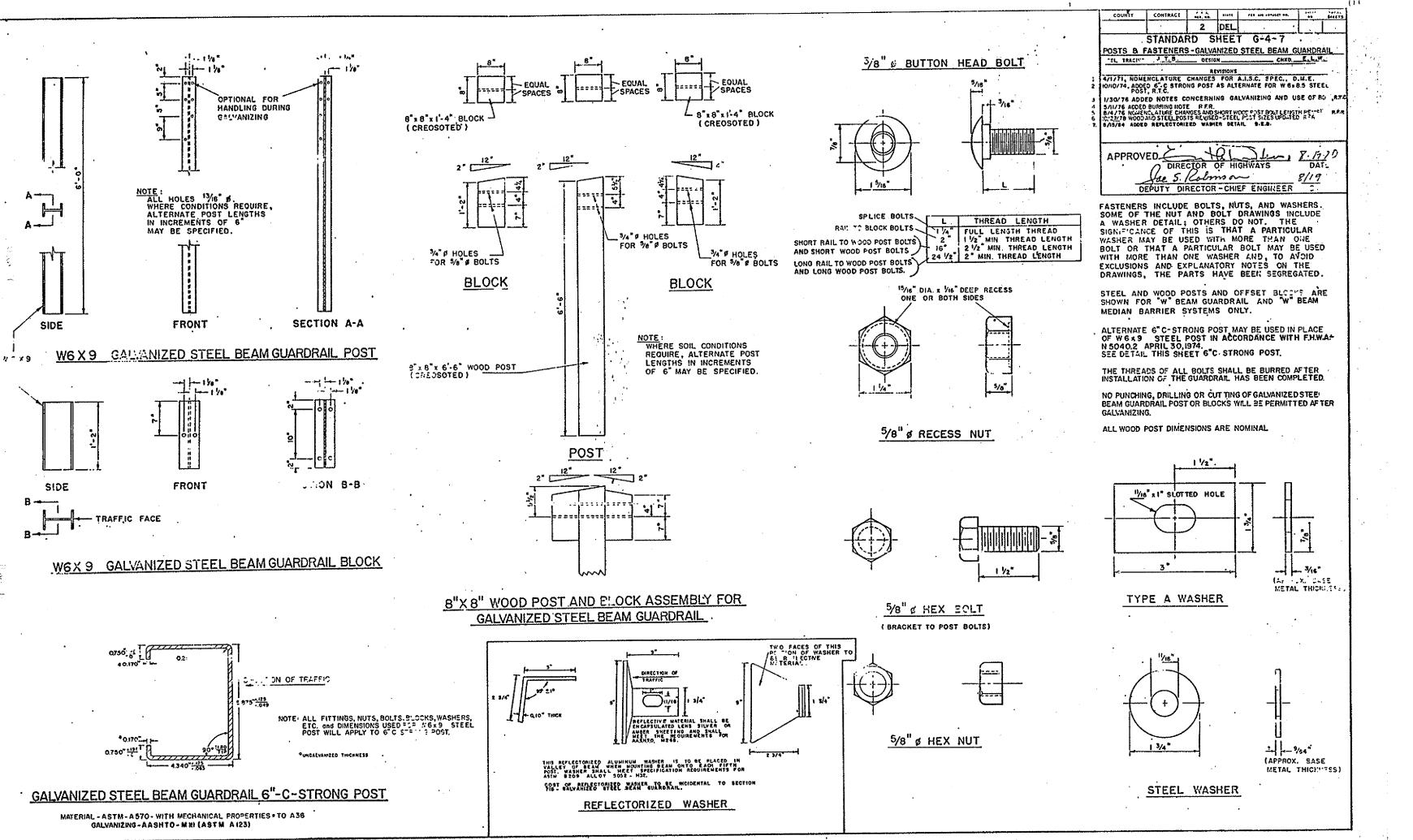






# # # | \$1411 | FID 500 PARTIES AD

CONTRACT



I-95 RESURFACING AREAS 2-7 GUARDRAIL STUDY

## GENERAL NOTES

- 1. THIS CONTRACT IS TO BE CONSTRUCTED IN ACCORDANCE WITH DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED JULY 1985. AS DESCRIBED IN SECTION 105.04.
- 2. MAINTENANCE OF TRAFFIC ALL WORK SHALL BE PERFORMED IN A MANNER THAT WILL INSURE THE LEAST PRACTICABLE OBSTRUCTION TO TRAFFIC CONSISTENT WITH SAFETY AND SHALL COMPLY WITH THE DEPARTMENT MANUAL ENTITLED "TRAFFIC CONTROLS FOR STREETS AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY AND EMERGENCY OPERATIONS" (MARCH, 1993). THE LAST CURRENT VERSION OF THIS MANUAL IN EFFECT AT THE TIME OF ADVERTISEMENT FOR BIDS SHALL BE USED. HEREINAFTER, THIS MANUAL SHALL BE REFERRED TO AS THE "TRAFFIC CONTROL MANUAL". THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR APPROVAL BY THE ENGINEER BEFORE THE START OF THE PROJECT.
- 3. ALL UTILITIES PLOTTED ON THE PLAN SHEETS ARE FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR, PRIOR TO LAYING A RUN OF DRAINAGE PIPE OF THER INVOLVED CONSTRUCTION, SHALL EXCAVATE WITHIN THE ALIGNMENT AT POINTS OF POSSIBLE CONFLICT TO DETERMINE IF A CONFLICT EXISTS. ANY CONFLICTS SHALL BE COORDINATED BY THE CONTRACTOR WITH THE ENGINEER AND THE UTILITY INVOLVED. THE ENGINEER SHALL DETERMINE THE SOLUTION. EXCAVATING AND BACKFILLING OF THE TEST HOLES SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM 208000, EXCAVATION AND BACKFILL FOR PIPE TRENCHES, BUT ONLY THE ACTUAL DEPTH EXCAVATED.
- 4. THE CONTRACTOR SHALL GIVE TWO (2) WEEKS NOTICE TO THE PROPERTY OWNER WHEN ANY FIXTURE, SHRUB, OR OTHER OBJECT MUST BE REMOVED FROM THE RIGHT OF WAY OR EASEMENT AREA. IF THE OWNER HAS NOT ATTEMPTED TO SALVAGE THIS PROPERTY, THE CONTRACTOR SHALL REMOVE IT WITHOUT OBLIGATION. COMPENSATION SHALL BE INCIDENTAL TO THE CONTRACT.
- 5. THE ENDS OF ALL CURBS SHALL BE DEPRESSED AT A RATIO OF TWELVE TO ONE (12:1), UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- 6. THE CONTRACTOR SHALL PROVIDE AND INSTALL PVC SLEEVES (4" INSIDE DIAMETER MINIMUM, 6" INSIDE DIAMETER MAXIMUM IN PROPOSED CONCRETE SIDEWALKS, ISLANDS, AND MEDIANS FOR FUTURE TRAFFIC SIGN POSTS AS DIRECTED BY THE ENGINEER. THE LOWER END OF THE SLEEVE SHALL SIT ON THE TOP OF THE SUBBASE. THE COST SHALL BE INCIDENTAL TO THE CONTRACT.
- 7. CATCH BASIN AND MANHOLE STEPS MAY BE OF THE TYPE CONSTRUCTED OF MOLDED PLASTIC WITH A REINFORCING BAR CORE, AT NO EXTRA COST, IN PLACE OF THE TYPE REQUIRED AND SHOWN ON STANDARD SHEET D-I-II. THE MOLDED PLASTIC TYPE STEPS SHALL CONFORM TO THE APPLICABLE SECTIONS OF ASTM A-615, A-478. AND ASTM D-4101.

#### PROJECT NOTES

- 1. IN ADDITION TO THE DAYTIME WORK, THE CONTRACTOR WILL BE PERMITTED TO WORK AT NIGHT TO ENSURE A TIMELY COMPLETION OF THIS PROJECT.
- 2. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY BY TELEPHONE "MISS UTILITY" (TELEPHONE 800-282-8555) 48 HOURS PRIOR TO EXCAVATING ACROSS OR NEAR ANY UNDERGROUND UTILITY.

# MAINTENANCE OF TRAFFIC

- 1. THE CONTRACTOR IS ENCOURAGED TO PRESENT ADVANTAGEOUS CONSTRUCTION METHODS AND INNOVATIVE IDEAS THAT WILL EXPEDITE AND IMPROVE CONSTRUCTION WORK ON THIS PROJECT. SUBMITTALS WILL BE GIVEN CONSIDERATION AND REVIEWED BY THE DEPARTMENT FOR IMPLEMENTATION INTO THE PROJECT. ALL SUCH SUBMITTALS REQUIRE DEPARTMENT AND FWHA APPROVAL PRIOR TO IMPLEMENTATION.
- 2. THE CONTRACTOR WILL COORDINATE THEIR WORK WITH THE ONGOING I-95 RESURFACING PROJECT.
- 3. CASES 16 AND 27 OF THE "TRAFFIC CONTROL MANUAL" WILL BE USED WITH THE APPROVAL OF THE ENGINEER. ONLY SHOULDER CLOSURE WILL BE ALOUD ALONG I-295. BUT ON I-95 THE LANE AND SHOULDER CLOSEST TO THE MEDIAN SHALL BE CLOSED.

#### SUMMARY OF QUANTITIES

ITEM #	DESCRIPTION	UNIT	QUANTITY
SECTION	200 - EARTHWORK		
211002	REMOVAL OF STRUCTURES AND OBSTRUCTIONS (GUARDRAIL)	LF (A. 2004)	250
SECTION	400 - BITUMINOUS PAVEMENTS		
401002	HOT-MIX, HOT-LAID BITUMINOUS CONCRETE PAVEMENT, TYPE B	TON	556
401003	HOT-MIX, HOT-LAID BITUMINOUS CONCRETE PAVEMENT, TYPE C	TÓÑ	420
-			
SECTION	719 TO 731 - GUARDRAIL AND FENCING		

720554	IMPACT ATTENUATOR TYPE 3	· · · · · · EA	1
720527	PLASTIC DRUMS	EA-DY	330
720518	RELOCATING CRASH CUSHION (SAND BARRELS)	EA	28
720001	GALVANIZED STEEL BEAM GUARDRAIL (STEEL POST)	LF	900
SECTION	719 TO 731 - GUARDRAIL AND FENCING		

SECTION	742 TO 754 - TRAFFIC		
743003	ARROW PANELS, TYPE 'C'	EÁ-DY	6
743500	WARNING LIGHTS, TYPE 'A'	EA-DY	18
743501	WARNING LIGHTS, TYPE 'B'	EA-DY	18
743514	FURNISH AND MAINTAIN MESSAGE BOARD	EA-DY	3
743525	TEMPORARY WARNING SIGNS	EA-DY	81
743537	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR, TYPE II	EA-DY	6
746591	FURNISH AND MAINTAIN PORTABLE LIGHT ASSEMBLY	EA-DY	6.

SECTION	755 TO 763 - MISCELLANEOUS		
758000	REMOVAL OF EXISTING P.C.C. PAVEMENT SIDEWALK, ETC.	CURB, SY	2475
762002	SAW CUTTING, CONCRETE FULL DEPTH		100

Existing
Shoulder
Concrete Median
Shoulder

REMOVE EXISTING P.C.C.
MEDIAN TO MEET EXISTING
CONDITIONS

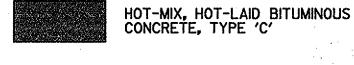
2%

PROPOSED HOT-MIX, HOT-LAID

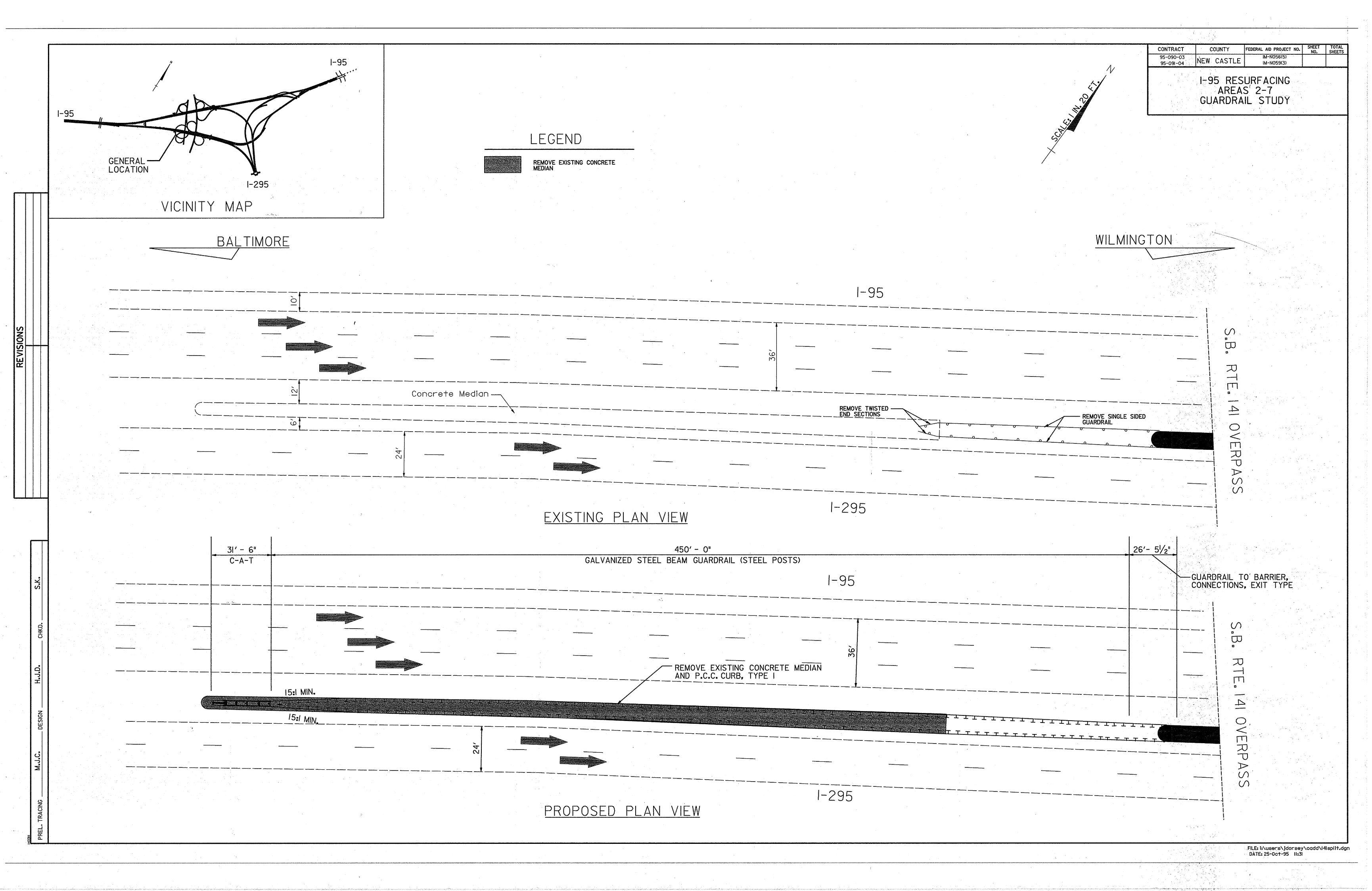
PROPOSED GALVANIZED STEEL
BEAM GUARDRAIL(STEEL POST)

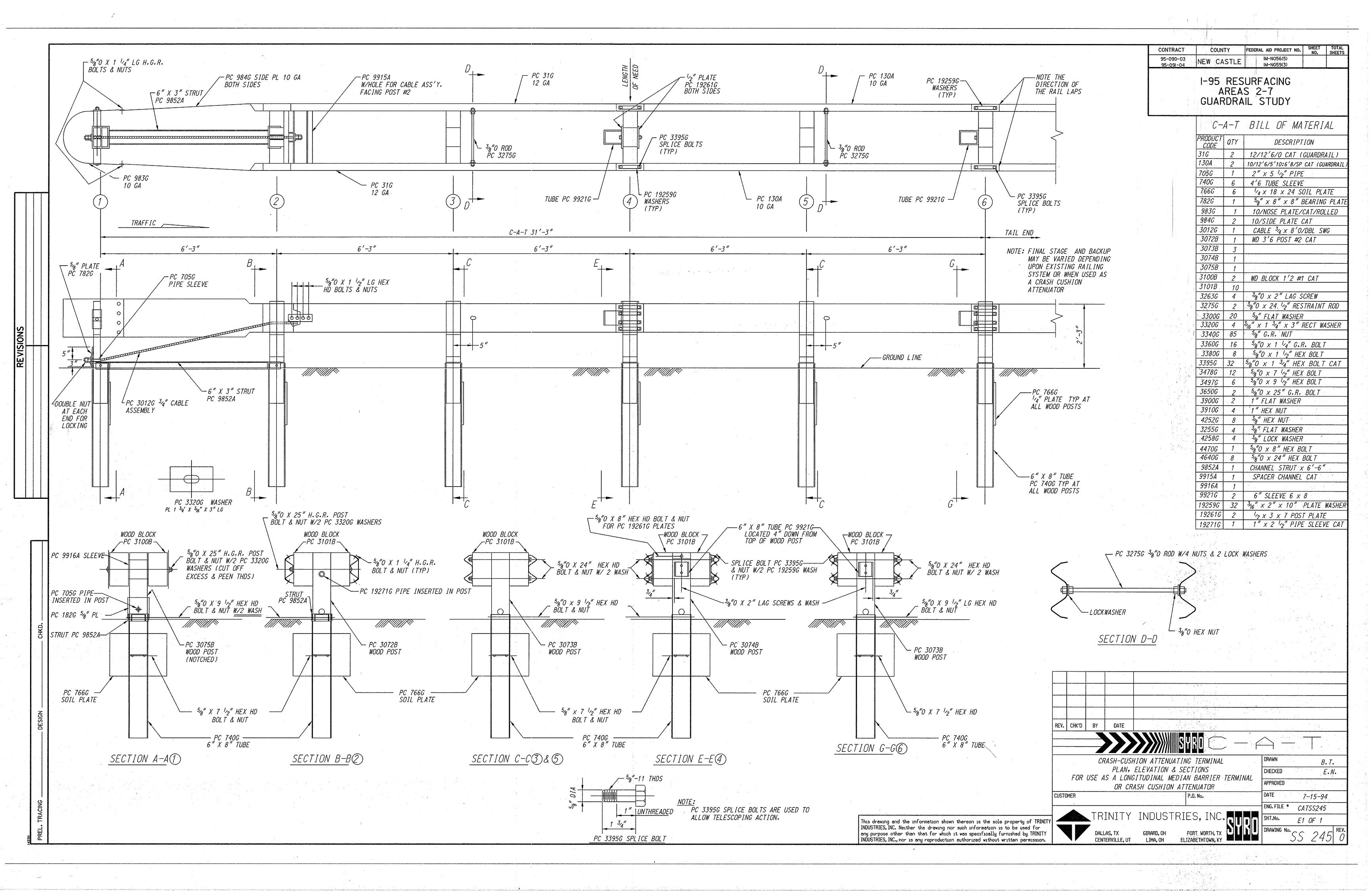
TYPICAL SECTION
N.T.S.

LEGEND









I-95 RESURFACING AREAS 2-7 GUARDRAIL STUDY

# GENERAL NOTES

- 1. THIS CONTRACT IS TO BE CONSTRUCTED IN ACCORDANCE WITH DELAWARE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED JULY 1985. AS DESCRIBED IN SECTION 105.04.
- 2. MAINTENANCE OF TRAFFIC ALL WORK SHALL BE PERFORMED IN A MANNER THAT WILL INSURE THE LEAST PRACTICABLE OBSTRUCTION TO TRAFFIC CONSISTENT WITH SAFETY AND SHALL COMPLY WITH THE DEPARTMENT MANUAL ENTITLED "TRAFFIC CONTROLS FOR STREETS AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY AND EMERGENCY OPERATIONS" (MARCH, 1993). THE LAST CURRENT VERSION OF THIS MANUAL IN EFFECT AT THE TIME OF ADVERTISEMENT FOR BIDS SHALL BE USED. HEREINAFTER, THIS MANUAL SHALL BE REFERRED TO AS THE "TRAFFIC CONTROL MANUAL". THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR APPROVAL BY THE ENGINEER BEFORE THE START OF THE PROJECT.
- 3. ALL UTILITIES PLOTTED ON THE PLAN SHEETS ARE FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR, PRIOR TO LAYING A RUN OF DRAINAGE PIPE OF THER INVOLVED CONSTRUCTION, SHALL EXCAVATE WITHIN THE ALIGNMENT AT POINTS OF POSSIBLE CONFLICT TO DETERMINE IF A CONFLICT EXISTS. ANY CONFLICTS SHALL BE COORDINATED BY THE CONTRACTOR WITH THE ENGINEER AND THE UTILITY INVOLVED. THE ENGINEER SHALL DETERMINE THE SOLUTION. EXCAVATING AND BACKFILLING OF THE TEST HOLES SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM 208000, EXCAVATION AND BACKFILL FOR PIPE TRENCHES, BUT ONLY THE ACTUAL DEPTH EXCAVATED.
- 4. THE CONTRACTOR SHALL GIVE TWO (2) WEEKS NOTICE TO THE PROPERTY OWNER WHEN ANY FIXTURE, SHRUB, OR OTHER OBJECT MUST BE REMOVED FROM THE RIGHT OF WAY OR EASEMENT AREA. IF THE OWNER HAS NOT ATTEMPTED TO SALVAGE THIS PROPERTY, THE CONTRACTOR SHALL REMOVE IT WITHOUT OBLIGATION. COMPENSATION SHALL BE INCIDENTAL TO THE CONTRACT.
- 5. THE ENDS OF ALL CURBS SHALL BE DEPRESSED AT A RATIO OF TWELVE TO ONE (12:1), UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- 6. THE CONTRACTOR SHALL PROVIDE AND INSTALL PVC SLEEVES (4" INSIDE DIAMETER MINIMUM, 6" INSIDE DIAMETER MAXIMUM IN PROPOSED CONCRETE SIDEWALKS, ISLANDS, AND MEDIANS FOR FUTURE TRAFFIC SIGN POSTS AS DIRECTED BY THE ENGINEER. THE LOWER END OF THE SLEEVE SHALL SIT ON THE TOP OF THE SUBBASE. THE COST SHALL BE INCIDENTAL TO THE CONTRACT.
- 7. CATCH BASIN AND MANHOLE STEPS MAY BE OF THE TYPE CONSTRUCTED OF MOLDED PLASTIC WITH A REINFORCING BAR CORE, AT NO EXTRA COST, IN PLACE OF THE TYPE REQUIRED AND SHOWN ON STANDARD SHEET D-I-II. THE MOLDED PLASTIC TYPE STEPS SHALL CONFORM TO THE APPLICABLE SECTIONS OF ASTM A-615, A-478, AND ASTM D-4101.

#### PROJECT NOTES

- 1. G-R-E-A-T SYSTEM MODIFICATIONS ARE NECESSAY AT TWO LOCATION IN AREA 6. THEY ARE LOCATED AT MILE POSTS 7.2 AND 8.8.
- 2. INSTALLATION SHALL BE AS PER ENERGY ABSORPTION SYSTEM, INC. DESIGN AND INSTALLATION MANUALS
- 3. REMOVAL AND SALVAGE OF EXISTING G-R-E-A-T SYSTEMS AND THE REMOVAL OF P.C.C. SAFETY BARRIERS SHALL BE INCIDENTAL TO THE COST OF THE PROPOSED G-R-E-A-T SYSTEM. THE SALVAGED G-R-E-A-T SYSTEMS SHALL BECOME THE PROPERTY OF DELAWARE TURNPIKE.
- 4. IN ADDITION TO THE DAYTIME WORK, THE CONTRACTOR WILL BE PERMITTED TO WORK AT NIGHT TO ENSURE A TIMELY COMPLETION OF THIS PROJECT.

  SAFETY BARRIER WILL BE PAID FOR UNDER THE EXISTING LF. UNIT COST.

  ADDITIONAL COSTS TO REINFORCE THE BARRIER ACCORDING TO THE DETAILS SHALL BE INCLUDED IN THE COST OF THE IMPACT ATTENUATOR 1 (720517)

- 5. THE CONTRACTOR SHALL PROTECT EXISTING UTILITIES AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY BY TELEPHONE "MISS UTILITY" (TELEPHONE 800-282-8555) 48 HOURS PRIOR TO EXCAVATING ACROSS OR NEAR ANY UNDERGROUND UTILITY.
- 6. THE CONTRACTOR SHALL REMOVE, STORE AND RESET ALL LAMP POSTS, STREET SIGNS, ETC., AS DIRECTED BY THE ENGINEER. THESE ITEMS SHALL BE CAREFULLY REMOVED AND STORED BY THE CONTRACTOR TO PREVENT DAMAGE OF ANY KIND. ALL DAMAGED ITEMS AS DETERMINED BY THE ENGINEER MUST BE REPLACED. THE COST THEREOF SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 763500, MAINTENANCE OF TRAFFIC.
- 7. THE PROPOSED CONCRETE PAD SHALL BE INCIDENTAL TO ITEM NO. 758000, "REMOVAL OF EXISTING P.C.C. PAVEMENT CURB, SIDEWALK, ETC."

## MAINTENANCE OF TRAFFIC

- 1. THE CONTRACTOR IS ENCOURAGED TO PRESENT ADVANTAGEOUS CONSTRUCTION METHODS AND INNOVATIVE IDEAS THAT WILL EXPEDITE AND IMPROVE CONSTRUCTION WORK ON THIS PROJECT. SUBMITTALS WILL BE GIVEN CONSIDERATION AND REVIEWED BY THE DEPARTMENT FOR IMPLEMENTATION INTO THE PROJECT. ALL SUCH SUBMITTALS REQUIRE DEPARTMENT AND FWHA APPROVAL PRIOR TO IMPLEMENTATION.
- 2. THE CONTRACTOR WILL COORDINATE THEIR WORK WITH THE ONGOING I-95 RESURFACING PROJECT.
- 3. CASES 16 AND 27 OF THE "TRAFFIC CONTROL MANUAL" WILL BE USED WITH THE APPROVAL OF THE ENGINEER. AT BOTH LOCATIONS THE NORTHBOUND AND THE SOUTHBOUND SIDES OF I-95 WILL INCLUDE THE CLOSURE OF THE LANE CLOSEST TO THE MEDIAN.

## SUMMARY OF QUANTITIES

ITEM #	DESCRIPTION	UNIT	QUANTITY
SECTION	600 - STRUCTURES		
602546	WATERPROOFING P.C.C. MASONRY	SF	64
SECTION	719 TO 731 — GUARDRAIL AND FENCING		
720518	RELOCATE CRASH CUSHIONS (SAND BARRELS)	EA	56
720527	PLASTIC DRUMS	EA-DY	230
720517	IMPACT ATTENUATOR TYPE 1	EA	4
7205,12	P.C.C. SAFETY BARRIER	LF	24
SECTION	742 TO 754 - TRAFFIC		
743003	ARROW PANELS, TYPE 'C'	EA-DY	8
743500	WARNING LIGHTS, TYPE 'A'	EA-DY	24
743501	WARNING LIGHTS, TYPE 'B'	EA-DY	24
			•

743500	WARNING LIGHTS, TYPE 'A'	EA-DY	24
743501	WARNING LIGHTS, TYPE 'B'	EA-DY	24
743514	FURNISH AND MAINTAIN MESSAGE BOARD	EA-DY	8
743525	TEMPORARY WARNING SIGNS	EA-DY	108
743537	FURNISH AND MAINTAIN TRUCK MOUNTED ATTENUATOR. TYPE II	EA-DY	8
746591	FURNISH AND MAINTAIN PORTABLE LIGHT ASSEMBLY	EA-DY	8

SECTION	755 TO 763 - MISCELLANEOUS		
758000	REMOVAL OF EXISTING P.C.C. PAVEMENT CURB, SIDEWALK, ETC.	SY	8
762002	SAW CUTTING, CONCRETE FULL DEPTH	LF	70

